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LETTER

FROM

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GEORGE COMBE
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TO

FRANCIS JEFFREY, Esq.

IN

ANSWER

TO HIS

CRITICISM ON PHRENOLOGY,

CONTAINED IN

No LXXXVIII. OF THE EDINBURGH REVIEW.

25 Jan 1826

Moved " by the sound, the King grew vain :

" Fought all his battles o'er again ;

" And THRICE he routed all his foes, and THRICE he SLEW the SLAIN."

ALEXANDER'S FEAST.

JOHN ANDERSON, JUN., EDINBURGH,

55, NORTH BRIDGE STREET ;

LONGMAN, REES, ORME, BROWN, & GREEN, AND

SIMPKIN & MARSHALL, LONDON.

1826.

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LETTER

FROM

GEORGE COMBE TO FRANCIS JEFFREY, Esq.

SIR,

AN elaborate and ingenious criticism on my work on Phrenology has just appeared in the 88th number of the Edinburgh Review, which common report attributes to your pen. Finding myself assailed not only by the wit and argument of that article, but by the whole weight of your literary and philosophical reputation, I endeavoured to ascertain the grounds on which you were designated as its author; and, in addition to the strong intrinsic evidence afforded by the article itself, I have traced the statement, in numerous instances, to individuals who say that they received the information from yourself. Thus situated, I use the freedom to address this answer to you, not merely as the reputed editor of the Review, but as the individual author of the criticism in question.

In the 15th article of the 4th number of the Edinburgh Review for April, 1803, the late Dr Thomas Brown exclaimed, "Of Dr Gall and his skulls who has not heard!" After eleven pages of hostile argument, he "*trusts*, that his "*readers are ALREADY SUFFICIENTLY CONVINCED that the principles on which Dr Gall has founded his theory are erroneous;*"

and adds, that "it is *unfortunate* for Dr Gall's theory that he has "entered into the detail of it with such minute exactness, *as it enables every one too easily to compare its predictions with the skulls of those around him.*"

In the 49th number of the same Review, the late Dr John Gordon exclaims, "Our readers will here recognize, "without any difficulty, the same man of skulls whom we had occasion to take notice of more than twelve years ago. *Long before this time we should have looked for his Craniological death !*" "We look upon the whole doctrines taught "by these two modern Peripatetics, (Drs Gall and Spurzheim,) "anatomical, physiological, and physiognomical, as a piece of "thorough quackery from beginning to end ; and we are persuaded "that every intelligent person who takes the trouble to read a single chapter of the volumes before us will view them precisely in "the same light."—"They are a collection of mere absurdities, "without truth, connexion, or consistency, which nothing could "have induced any man to have presented to the public, under pretence of instructing them, but absolute insanity, gross ignorance, "or the most matchless assurance."

These were pretty plain intimations to the public of the opinions of the Edinburgh Review ; and if "Craniology" did not immediately thereafter give up the ghost, you, at least, were guiltless of its future inroads and ravages. The public *at first* believed every word of this criticism, and railed at Craniology in round set terms, furnished by your Review ;—gave up purchasing and reading the works on the subject, and seemed, for a time, to have consigned it to oblivion.* With an obstinate, but not an ignorant perversity, however, (excited partly by the first edition of the work you have just condemned,) the public "took to their old idols again ;" after reflection, and observation of facts, many of them openly and audaciously professed belief in "Craniology," dignified, at length, by the name of Phrenology ; and plainly showed that the two articles of your Review in 1803 and 1815 had been utter failures.

* Dr Spurzheim's publisher told me, that the sale of his works completely stopped after the appearance of the 49th number of the Edinburgh Review, and did not revive till 1819, after which it went on rapidly, and it still proceeds.

The flourish with which you introduce the third attack is in the following terms :—" Every one, of course, has heard " of Dr Gall's Craniology, and seen his plaster heads, mapped out " into the territories of some thirty or forty independent faculties. " *Long before this time, we confess, we expected to have seen them " turned into toys for children, and this folly consigned to that " great limbo of vanity to which the dreams of alchemy, sympathetic medicine, and animal magnetism had passed before it.*" It seems really to provoke you that Phrenology *will not die.* You tell us in this article, that " the dogmatism and arrogance of its advocates were really BEGINNING TO BE TIRE-SOME, and the folly had lasted RATHER TOO LONG." No wonder ! It has lasted twenty-three years after you had deprived it of every shadow of plausibility ! It is now believed in and supported by full-grown men, who were not in existence when you first attacked it. This *is* lasting " rather too long." You assure us, however, that " it would, *no doubt,* decline of itself in *no VERY long time* ; and, in supposing " that we have now done something to accelerate its cessation, we " are probably vainly arrogating to ourselves an honour that will " belong entirely to the progress of reason, or the more fortunate " distraction of some newer delusion." It was this passage, coupled with the two previous attacks of the Review, that suggested the motto to the present Letter.

The strong contempt which you entertain for Phrenology has kept you sadly ignorant of its history and progress. You have written sixty-six pages replete with hostile arguments, original, no doubt, to yourself, but the most of them familiar, as a thrice-told tale, to those who have attended to the discussions about the science. Did the public not know your genius and originality, it would be impossible for them to doubt, that you had ransacked the pages of Blackwood's Magazine, the Literary Gazette, and other equally philosophical oracles,—picked up every argument they contain against Phrenology, and spun them into this web of your own. Your objections, almost without a single exception, have been already propounded, refuted, and given up by their advocates, and, what is more, by the public. It shall be my business to prove this as we proceed.

You say, "We do not hear that Phrenology makes much way in London or Paris." This is because you do not read the periodical notices of its progress. Allow me then to mention, that there is in London a Phrenological Society, embracing upwards of a hundred members, not obscure persons, but members of parliament, doctors in medicine, barristers, and such like. In April and May, 1826, Dr Spurzheim lectured in that city to an audience exceeding 800 individuals of the highest rank and intelligence; and, finally, for brevity's sake, the *Medico-Chirurgical Review* for October, 1826, the most widely-circulated and the most esteemed medical journal in Europe, has published a review of the system of Phrenology, in which the following passage occurs:—

"Phrenology is more intimately connected with the applications of medical knowledge than may at first sight be apparent. On this account, therefore, *we recognize in the science of its principles a legitimate and useful subject of professional inquiry*. We must acknowledge, at the same time, that we feel impelled, *by the pure force of multifarious and unquestionable evidence*, to regard this *as the most intelligible and self-consistent system of mental philosophy that has ever yet been presented to the contemplation of inquisitive men*." After a full, able, and accurate analysis of the work, the journalist concludes:—"We might have expatiated at great length on the utility of this science, in its applications to the purposes of education, legislation, political economy, criminal jurisprudence, history, legal and theological elucution, and, *above all*, **TO THE TRUE PHILOSOPHY OF MEDICINE**; but we have abstained from this indulgence, in the belief that the foretaste of an intellectual luxury we have provided for our readers will stimulate them to desire the enjoyments of a full repast."—P. 468.

In regard to the progress of the science in *Paris*, I beg to refer you to the following extract of a letter from a gentleman in that city, published in the *Transactions of the Phrenological Society* in 1824.—"It is worth mentioning also, that, about two years ago, Dr Gall, at the request of the Minister of the Interior, commenced lecturing for the benefit of the Medical Students in Paris. The lectures were, like others, delivered gratis; but he was provided with the use of the operation and lecture room in the *Hospice de Perfectionnement*, for his first course, and afterwards, on account of that being too small, with the large examination-room of the Institution

“ des Jeunes Aveugles, which is well fitted for the purpose.
 “ His audience amounted to betwixt 200 and 300 ; and so eagerly is he attended, that it is well known that many more tickets
 “ were applied for at each course than could be given, and that
 “ the apartment was regularly crowded half an hour before the
 “ lecture began. Dr Spurzheim also continues to lecture in
 “ Paris, and although, from his demanding a fee, his auditory
 “ is not numerous compared with Dr Gall’s, yet he is regularly
 “ attended, and his course is esteemed the more philosophic of
 “ the two.”

The statements of this letter are confirmed by a notice which appeared in the New Monthly Magazine for January, 1823.—“ *Histoire des Fonctions du Cerveau. Par le Docteur Gall, 2 vols. 8vo, Paris, 1822.*

“ This is another exposition of Dr Gall’s system of *Invincible*
 “ (innate) *Dispositions*. This gentleman, who possesses no little
 “ talent, both as a physician and a writer, has been practising,
 “ for the last twelve or fifteen years, in Paris, where he has established a reputation, and realized a handsome fortune. On
 “ the first development of his system, it was received either with
 “ unthinking pleasantry, or dismissed as idle, without due consideration ; but a more intimate knowledge of the man has led,
 “ if not to the adoption of his ideas, at least to a more serious
 “ and respectful examination of them. There are many men
 “ here (Paris) amongst the most eminent for their medical and
 “ physiological knowledge, who, though differing widely upon
 “ other scientific topics, yet agree in saying, that there is much,
 “ not only of probability, but of truth, in the system of Dr Gall.
 “ It is certain, that one of the most powerful motives of human
 “ action, *instinct*, has been but very imperfectly examined by the
 “ most celebrated modern philosophers, and, amongst others, the
 “ acute Helvetius. It appears to be the general opinion of the
 “ present *savans* of Paris, that Dr Gall’s system calls for a much
 “ more serious and profound examination than it has hitherto
 “ undergone. To this task it will be necessary to bring a considerable share of anatomical science, as the Doctor, it is said,
 “ has made some very important discoveries in the structure of
 “ the brain. This new edition, which is improved and enlarged,
 “ will consist of eight volumes 8vo.”

The account given in the foregoing letter regarding the opinions entertained in Paris, although published in this country several years ago, and reprinted at the time in a Parisian newspaper, have never been contradicted. Not only so, but they have been supported by many subsequent notices in the

philosophical journals of France, particularly the *Revue Encyclopedique*.

In page 295 of your Review, you state, "that several persons who had been at first rather taken with the new doctrines, had, by more careful observation, been thoroughly convinced of their fallacy." This also is an unfounded and very frequently-refuted assertion. It is adverted to in the following letter by Dr Spurzheim, likewise published in the *Phrenological Transactions*.

"In the whole of our travels," says he, "we have been well received, and the second course was always more fully attended than the first, so that there was no doubt that the subject excited great interest. But it is to be regretted that we stopt too short a time to form practical pupils. The principles were explained, the development shewn, and we were off. You will conceive that this was not the way to establish the doctrine. We had more advantage than our pupils, because we had great opportunities of observing the heads of many men of talents; we got more conviction than our auditors. We were prepared by previous study to make observations, but our stay was too short to teach the auditors to repeat them. Dr Gall even gave the advice not to repeat the experiments, since it is difficult to do so, which I have mentioned in my large English work, 2d edition, p. 270. But I assure you, that not one *Phrenologist*, from knowledge, has fallen back, saying that the doctrine is false. I have seen frequently the contrary, *i. e.* the belief in it strengthened by self-observations."

Farther, the assertion, that individuals, after once believing, have discovered evidence which induced them to renounce their faith, must imply one of two alternatives,—either that nature changed betwixt the period of belief and that of disbelief, or that the persons alluded to became converts at first from credulity, without due examination. The first alternative will scarcely be alleged to have happened; and as the second implies a total want of a philosophic understanding in the individual, and indeed admits his previous stultification, I willingly allow you all the advantages which you can derive from such testimony against the truth of the doctrines. Even although some persons should affirm that they have made observations, and found the result to differ from the assertions of the *Phrenologists*,—this

would be nothing more than has happened in the case of other sciences, which have nevertheless been ultimately admitted to be true. Mr Playfair mentions that Mariotte, “ though very conversant with experiment, *appears never to have succeeded in repeating the experiments of Newton.*” Supp. to Encyc. Brit. second Dis. p. 57.

To complete this brief notice of the progress of the science, allow me to add, that Dr Otto, an established medical professor, and editor of a medical journal in Copenhagen, lectures on Phrenology as the true theory of the functions of the brain, advocates its cause in his Journal, and has published a separate work in elucidation of it. In the United States there are Phrenological Societies in Philadelphia and Washington; and lectures have been delivered at the latter city, New York, and Lexington. Dr Caldwell of Lexington is an endowed medical professor, who has both published and lectured on the science; and, in particular, his course in Washington this year was attended by the highest functionaries of the American state, and many members of Congress. In Calcutta there is a Phrenological Society; and, as a proof that it is not a dormant body, it may be mentioned, that there is now on my table a pamphlet, or rather a book of 126 octavo pages, published there in 1825, against the science. I could add many more proofs that Phrenology is far more widely extended than you appear to dream of; but one more shall suffice. In the spring of 1826, a Mechanics’ Phrenological Society was formed in Dundee. The first letter of their Secretary announcing the information was as follows:—

“ Dundee, May 2, 1826.—To GEORGE COMBE, Esq.—RESPECTED SIR,—The members of the Dundee Mechanics’ Phrenological Society request me to transmit you their *most sincere thanks* for the interest you have taken in their welfare, by sending them, through Mr Galloway, a copy of your System of Phrenology at a reduced price. At the same time they wish me to give you some account of the motives which induced us to form ourselves into a society for the purpose of obtaining a knowledge of phrenological truth; the chief of which was, the education of youth. It has long appeared to a few of us, that the present sys-

“ tems of education (I use the word in its widest sense) are deficient,
 “ because they do not seem to be founded upon a true knowledge of
 “ the nature of man, by presupposing equal natural abilities in all,
 “ and holding, that education alone is competent to make a youth
 “ a mechanic, a lawyer, an orator, or a divine. But, experiencing
 “ in our families the truth of the poet’s observation, that

“ ‘ The hand of Nature on peculiar minds

“ ‘ Imprints a different bias,’ ”

“ we resolved to study Phrenology, and finding it (as far as our li-
 “ mited observations went,) to be in accordance with nature, we
 “ formed ourselves into a society, that we might the more easily ob-
 “ tain the necessary books, busts, and apparatus, and, by our united
 “ observations, aid each other in sooner acquiring a knowledge of
 “ the science. We have now procured your ‘ Elements’ and ‘ Sys-
 “ ‘ tem,’ a ‘ set’ of busts and callipers, and two or three of our num-
 “ ber are finishing craniometers for our use, which will enable us to
 “ take more correct measurements. We have drawn up a few re-
 “ gulations, but have not yet printed them, hoping we may procure
 “ a copy of those belonging to your society, which might suggest
 “ some new mode of procedure, as it is our wish to have every thing
 “ as wisely ordered as possible to disarm our opponents, of which we
 “ are honoured with a few, who industriously circulate Gordon’s
 “ critique upon the science amongst themselves,—a work which, I
 “ am told, is as full of opprobrious epithets as of sound philosophy.
 “ We have chosen the name of Mechanics, &c. partly because it is a
 “ true designation, and partly to distinguish *ours* from the *one*
 “ formed by our “ patricians,” who will doubtless contribute to
 “ throw new lights upon Phrenology by their discoveries; while *we*,
 “ from our stations, must be content to *receive* its lights, happy if
 “ we succeed in rendering them practically useful for restraining
 “ the propensities, nourishing the higher sentiments, and training
 “ the faculties of our youth into activity, thereby rendering them
 “ useful and virtuous citizens, fitted to adorn

“ ‘ The mild majesty of private life,

“ ‘ Where peace with ever-blooming olive crowns the gate.’ ”

“ Should your other avocations permit, we would feel proud of a
 “ continuance of the countenance with which you have already ho-
 “ noured us, which, I beg to assure you, would be gratefully re-
 “ ceived by, respected Sir, your very obedient servant,

“ ALEXANDER TAYLOR, Secy.”

The Secretary’s second letter, dated 10th October, 1826,
 is as follows.—

“ RESPECTED SIR, Dundee, 10th October, 1826.

“ In consequence of the increase of members to the Phrenological
 “ Society of this quarter, we find it necessary, in order to meet the
 “ demand of the younger members, to have other two copies of your
 “ System, and one copy of the Elements. I have, therefore, at

" their request, taken the liberty of applying to you, through the
 " medium of the guard of the Champion coach, for them, who has
 " instructions to pay you for them ; and, should it be convenient,
 " we would be obliged much by their being sent by return of the
 " the coach, as there is a meeting to-morrow evening. I remain, re-
 " pected Sir, your obedient servant, ALEXANDER TAYLOR."

Here, then, is evidence, that, notwithstanding of your utmost efforts, and not of yours alone, but those of nearly the whole periodical press of Europe, Asia, and America, Phrenology has extended itself into all these regions of the globe, and now embraces among its votaries men of every rank and profession, from the senator to the mechanic. One would imagine that such facts, if known to you, might have made you pause, and doubt of the infallibility of your own philosophy. The degree of knowledge which has forced its way into your mind has, indeed, modified the style of the present Review greatly to the better. Phrenologists were formerly "*quacks*," "*empirics*," "*itinerant philosophers*," "*mountebanks*," "*and*" "*cunning craniologists*;" now they are men of "*more than*" "*common acuteness*;" but their doctrines are still "*crude*," "*shallow*," "*puerile*," "*fantastic*," "*dull*," "*dogmatic*," "*incredibly*" "*absurd*," "*foolish*," "*extravagant*," and "*trash*." How, then, does it happen that a gentleman of your acknowledged talent and courtesy should be betrayed into such a dismal situation as you now occupy? for, after twenty-three years' experience of defeat, you are still denouncing a large number of intelligent men as lost in utter stupidity, because, after full examination, they believe in what you admit is, after all, a pure question of fact! This is easily explained without disparagement either to your sentiments or intellect. Your opinions were formed in a different school, before Phrenology was heard of; and you have never been able to overcome the force of your first impressions so far as to study it with an impartial mind.

Locke, in adverting to persons in a similar condition, says, " What probabilities are sufficient to prevail in such a case? And " who ever, by the most cogent arguments, will be prevailed upon " to disrobe himself at once of all his old opinions and pretensions " to knowledge and learning, which with hard study he hath all his

“time been labouring for, and turn himself out stark naked in quest of fresh notions? All the arguments that can be used will be as little able to prevail as the wind did with the traveller to part with his cloak, which he held only the faster.” (Book iv. c. 20. § 11.)

That the phrenological doctrines do appear to your mind enveloped in all the incongruity and absurdity which you have so lavishly expressed, is explicable, without the alternative necessarily following that these qualities really belong to them. When a new proposition is submitted to our consideration, we compare it with principles which we regard as established, and if we are able to connect it consistently with them, we admit it to be true, and give it our assent. If it appear at variance with our previous opinions, we are disposed to reject it as erroneous, and rarely possess the magnanimity to enter upon a scrutiny of our first impressions, so as to discover whether they, or the new ideas, coincide most closely with nature, the only authoritative standard of physical truth. On the contrary, we too frequently regard received opinions with an undoubting and superstitious veneration, and reject new propositions as intrinsically absurd, not because we have ascertained them to be in opposition to facts, but because they do not coincide with what we previously believed to be true. Dr Thomas Brown has justly remarked, “that to those who have not sufficient elementary knowledge of science, to feel any interest in physical truths, as one connected system, and no habitual desire of exploring the various relations of new phenomena, *many of the facts in nature*, which have an appearance of incongruity, as at first stated, do truly seem *ludicrous*.”

It now be my endeavour to show that this sentence of Dr Thomas Brown very accurately describes your mental condition on the subject of Phrenology.

Your article contains five or six distinct annunciations, that you have “completely refuted” the science, and to the surprise of your readers, it tugs and toils on at a new and additional refutation. This, while it shows that you are ill at ease as to your own success, renders an answer within moderate limits extremely difficult; and I hope, therefore, to

be excused for bringing your objections on each point into a focus, and condensing the reply to the narrowest limits consistent with perspicuity. It shall be my earnest endeavour not to mistake or misrepresent your meaning, but to quote your own words. If you had done this by me, the present reply might have been spared; for I observe, that you have generally preferred giving your own paraphrases of my statements, and have refuted these, leaving the real propositions quite unassailed. In truth, there is no review of the system of Phrenology; and no reader could form an accurate conception of that work from your representation of it. The article is a special pleading, all on one side, and its author resembles a party on his defence much more than a judge administering impartial justice.

You decline bringing Phrenology to the test of observation, because "A proposition, in point of fact, may be ambiguous or unintelligible; and before inquiring how it is proved, we must ascertain whether it has any meaning, and what that meaning truly is. When it is affirmed, that certain projections on the skull, or the brain, are the *organs* of all the *faculties* and dispositions of the mind, it will not do to proceed at once to the alleged proofs of this assertion; we must first determine what is meant by *organs*, and what by *faculties*, and in what sense these terms are here to be understood."—P. 255.

First, then, as to the organs. "Upon what grounds," you ask, "can the name of organs be applied to the bumps of the Phrenologists? or in what sense is it really intended that this name should be received in their science? *The truth*, we do not scruple to say it, is, *that there is not the smallest reason for supposing that the mind ever operates through the agency of any material organs*, except in its perception of material objects, or in the spontaneous movements of the body which it inhabits; and that this whole science rests upon a postulate or assumption, for which there is *neither any shadow of evidence, nor any shop of reasoning*."—P. 267. The same proposition is repeated in p. 293, and in several other parts of the Review. The proofs adduced are the following:—"INSECTS CONTINUE TO PERFORM ALL THEIR FUNCTIONS AFTER THEIR HEADS ARE OFF; and cold-blooded animals live and move in the same predicament!" In a subsequent page (312)

you inform us, that "the writer of these observations is not "learned in anatomy,"—a modest declaration indeed ; but one which was scarcely necessary after this specimen of physiological wisdom. The Creator erred, then, in adding the superfluous appendage of a head to insects : *you* would have managed the matter better, by retrenching this unmeaning excrescence !

As to cold-blooded animals living and moving in the same predicament, I would ask, how long do they perform these acts ? But we have the authority of your own Journal against your grand proposition. "His Imperial Majesty," says the Reviewer of 1803, "has had of late too many good opportunities "of knowing that *a man* cannot continue to march, and load, and "fire, when he has left his head behind him ; and the redoubtable "lecturer of Vienna has said little more. It may be wrong," continues he, "to allow a daring demonstrator of processes and "sinuosities to assert that the mind remembers, imagines, and "judges, only by the intervention of certain parts of the brain ; "but it is a piece of forbearance, at least as dangerous, to allow a single cellar to be open in the taverns of Vienna, *or "memory, imagination, and judgment, to be all set to sleep by a "few grains of a very common and simple drug.*"—Edinburgh Review, vol. II., p. 148. Memory, imagination, and judgment then, are neither acts of "perception of material objects, nor spontaneous movements of the body ;" yet wine and opium first stimulate, and finally overpower them. How does this accord with your doctrine, "that the mind "never operates through the agency of material organs" in performing these functions ?

This authority might be relied on as settling the question with you ; but to convey to persons, who are not familiar with these topics, some idea of the recklessness of your assertion, a few passages from the most common medical and physiological authors may be cited. Dr Cullen says, "*we cannot doubt that "the operations of our intellect always depend upon certain motions "taking place in the brain, &c.*"—Practice of Physic, vol. II., § 1538—9.

Dr Gregory, speaking of the internal faculties of the mind, says, "Omnes hæ facultates (videlicet memoria, imaginatio,

“judicium) tam purè mentis sunt, ut primo intuitu haud quicquam corporei iis inesse videatur: Docent tamen morbi qui eas impediunt certum cerebri statum, ut bene exercentur requiri: *idque sensuum internorum primum esse organum.*”

Magendie, whose name stands so high both in France and Britain, says, “The brain is the material instrument of thought. This is proved by a multitude (une foule) of experiments and facts.”*—*Precis Elementaire de Physiologie*, tome I., p. 115. edit. 1816.

Your next objection is the following:—“If the theory of the Phrenologists be right, it would seem to follow, *a fortiori*, First, that all the five external senses must have *organs in the brain*, as well as a connected apparatus or machinery beyond it;—and, secondly, it is, at all events, a fundamental point in their creed, that the mind *is not* in any way conscious or aware, even as to them, that it acts by means of organs having any locality at all. Now, the first and most plausible of these propositions they have themselves been forced to abandon; and both, we humbly conceive, are not only gratuitous, but, in any sound sense, entirely unfounded and erroneous.—P. 258.

In answer to the assertion, that “all the five external senses *must have organs in the brain*,” I beg to state, that, from the views entertained by Phrenologists regarding the senses, (some of which are stated in a subsequent part of this Letter,) no other organs than those already known appear to be necessary;—but, secondly, we are quite ready to admit such organs whenever you prove their existence as matter of fact. You reply, however, that “it will not do to suggest here, or in other cases, where the allowance of faculties is plainly insufficient, that these are mere omissions, which may still be supplied if necessary, and do not affect the principle of the system. The system, it must be remembered, rests *not on principle, but on observation alone*. Its advocates peril their cause on the assertion, that it is *proved* by observation, and as matter of fact, that their thirty-six bumps are the organs of thirty-six particular faculties, and no other,—that these organs have a certain definite shape and relative place and size,—and that

* These authorities are all cited in my “Essays on Phrenology,” published in 1819, in answer to a denial, in the 49th Number of the Edinburgh Review, that the brain is the organ of mind. They were not reprinted in the System, because the objection had been, till you took it up again, abandoned as utterly untenable.

“among them *they cover the whole skull, and occupy the whole surface of the brain.*”—P. 287. This is your statement; but the following is mine, printed in the work which you have reviewed:—“*There are parts at the base of the brain, in the middle and posterior regions, the size of which cannot be discovered during life, and whose functions in consequence are still unknown.* From analogy, and from some pathological facts, they are supposed to be the organs of the sensations of hunger and thirst, heat and cold, and of some other mental affections, for which cerebral organs have not been discovered; but demonstrative evidence to this effect being wanting, this conjecture is merely stated to incite to farther investigation.”—*System of Phrenology*, p. 31. If, then, you can show that there are mental affections attending the activity of the five senses, which cannot be referred to the external organs, nor to any of the internal organs admitted by Phrenologists, it will undoubtedly follow, on the principles of this science, that such affections must have organs also; but the objection, that “there is no room for them to extend their position,” is utterly unfounded.

As to the mind’s consciousness of organs, I shall notice, first, the real phrenological doctrine on that point; and, secondly, your commentary upon it. In the *System of Phrenology* it is stated, that “the mind is not *conscious* of acting by means of organs; and hence the material instruments, by means of which it performs its operations in this life, and communicates with the external world, cannot be discovered by reflection on consciousness.”—P. 25. In the *Essays on Phrenology* this doctrine is illustrated at some length; but the illustrations were omitted in “the *System*” as superfluous, the point having been conceded by every person who had considered the subject. Allow me, however, to repeat them, as you still dispute the accuracy of this fundamental principle of the science. “The *organs*, by means of which the mind acts upon, and by means of which it receives impressions from the external world, perform their functions without any consciousness in the mind either of their existence or their operations. For example, voice is produced by the contraction and relaxation of a number of muscles connected with the larynx, at the command of the will; and yet consciousness gives us no intimation either of the existence or functions of

“ these muscles. In like manner, the leg and arm are extended
 “ and withdrawn by means of the nerves of voluntary motion,
 “ and a great number of muscles at the command of the will ;
 “ and yet of the existence and operation of these nerves and
 “ muscles consciousness gives us no intimation. We are con-
 “ scious of the act of volition which puts them in motion, and
 “ of the result produced, but not of the existence and operation
 “ of the special nerves and muscles themselves.”—*Essay on Phre-
 nology*, p. 3.

Phrenologists then say, that the mind is not conscious of smelling by means of the olfactory nerves, hearing by the auditory, or seeing by the optic nerves.

On this doctrine you remark, “ but they are all agreed,
 “ it seems, that the mind has no *knowledge* of the existence
 “ of the organs of sense, or of the functions performed by
 “ them.”—P. 267. Here you have used the freedom to sub-
 stitute “ Knowledge,” which I did not write, for “ Conscious-
 ness,” the word actually employed ; and your reason for doing
 so will speedily appear. You proceed,—“ This, to most
 “ people, will probably appear more surprising still. Is it
 “ meant to be said, that we do not *know*, certainly, naturally,
 “ and immediately, that we see with our eyes, and hear with
 “ our ears, and feel with that part of our bodies on which an
 “ external impression is made ?” This objection is absolutely
 created by your substituting the assertion, that “ the mind has
 “ no *knowledge* of the organs of sense,” for the real proposi-
 tion, that it has “ no *consciousness*” of them. The Phrenolo-
 gists have not said, that we *do not know* that we see by the
 optic nerves, but only affirm, that this fact is ascertained by
observation, and not by instinctive consciousness ; and the
 inference which they draw is, that if we cannot discover the
 existence even of such palpable organs as the auditory and ol-
 factory nerves by means of simple consciousness or feeling,
 but must resort to observation to find them out, it is not
 wonderful that we should not be conscious of the internal or-
 gans of the mind, or that *observation* should be requisite to
 determine them also.

You anticipate this correction, and the answer that will be
 founded on it, and try to show that the words “ immediately

“know and feel,” are synonymous with “being conscious.” You then proceed :—“The true question upon either supposition is, whether, knowing and feeling, as, in one way or other, we do with the most perfect distinctness, that we see with our eyes, and hear with our ears, and that it is by these organs alone that the mind performs these functions, *it can be truly or even intelligibly said, that we are as little aware of acting by material organs when we so see or hear, as we are that we love our children, by bumps on the back of the head, or perceive the beauty of music by a small protuberance in the middle of the eyebrow.*”—P. 260. The only shadow of plausibility in this argument depends on your confounding facts and propositions that are altogether distinct. The ears, in popular language, include the whole auditory apparatus, namely, the external ear, the tympanum, labyrinth, semicircular canals, numerous small bones, and the auditory nerve which connects these with the brain; and the “eyes,” in common speech, include the eyeballs and the optic nerves. Now, “are we aware” of any thing more than the mere locality of the senses of hearing and seeing? Do you assert that we “are aware” of all the *organic apparatus now enumerated*, and that you are *conscious* that the existence of an external object becomes known to you, through the eye, only by means of an image depicted on your own retina? You certainly cannot maintain this. But we have the same general impression of the locality of the mind; we know that we do not love children by the foot, nor write reviews by the calf of the leg, but that thinking in general is performed by the head. If we go one step farther, however, and inquire whether we know that there is a brain, or an apparatus of organs in the interior of the skull, by means of which the processes of thinking are accomplished? the answer must be, that we do not know until we have ascertained the fact by observation. In like manner, I venture to assert, that mankind have found out the optic nerve to be the organ of vision, solely by observing, that vision never existed without it; or, in your own words, “by anatomy and experiment.” If this be sound physiology, does it warrant you to object to the doctrine which teaches, that,

in order to discover a particular portion of the brain to be the organ of Benevolence, we must observe the relation between the power of experiencing this emotion and the condition of that organic part? and yet this is the proposition which you adduce it to refute.

After stating your objections to the organs, you proceed,—

“ These last considerations lead us naturally to another class of objections which, we confess, have always appeared to us of themselves conclusive against this new philosophy,—those we mean which apply to the strange apparatus of *separate faculties and sentiments* into which it has parcelled out and divided the mind.

“ We are a little jealous of the word *faculties* in any philosophical discussion. *The mind, we take it, is one and indivisible*; and if by faculties is meant parts, portions, or members, by the aggregation of which the mind is made up, we must not only deny their existence, but confess that we have no great favour for a term which tends naturally to familiarize us with such an assumption. What are called faculties of the mind, we would consider as different *acts*, or rather *states* of it; but if this be the just view of the matter, it is plain that it renders it in the highest degree improbable, if not truly inconceivable, that those supposed faculties should have each a separate material organ.”—P. 261.

This objection has been long ago answered in the Phrenological Journal, vol. I. p. 206, and by the Rev. David Welsh, in a note to his Life of Dr Thomas Brown, quoted on page 54 of the “ System” which you were reviewing. Dr Brown maintains, that the word *faculties* means only *states* of the mind; and Mr Welsh observes, that “ the only difference that the doctrines of Phrenology introduce in regard to Dr Brown’s principle is, that, instead of the feelings and thoughts being merely the relations of the simple substance *mind*, to its own former states, or to external objects, they are the relations of the simple substance *mind* to certain portions of the encephalon.

“ In looking upon any object—as snow—we have the notion of a certain colour. Now, the notion is not in the snow, but in the mind; that is, the notion of colour is the mind existing in a certain relation to an external object. But it is allowed, on all hands, that there is an intervening step between the snow and the mind. There is an affection of the optic nerve. It will be conceded, that this does not alter the question as to the simplicity of the mind; and if this is conceded, it is abun-

“dantly obvious, that another step in the process might be conceived, without taking away from the simplicity of the immaterial part, and that, instead of an affection of the optic nerve being the immediate antecedent of the notion of colour, it might be a particular portion of the encephalon. As the notion of colour, upon this supposition, is a relation of the mind to the organ of Colour, it follows, that, if an organ were changed in any respect, the state of the mind would also be changed. Thus, if it were larger, or of a finer structure, or more active, the perception of colour would be more delicate, or quick, or pleasing. The same remarks might be extended to all the organs. Where the organ of Causality is large, as in the case of Dr Brown himself, then there will be a tendency to reason; which tendency is a state of the mind in relation to a material organ, which state would have been different had the organ been different.

“A multitude of organs may all be affecting the mind at the same instant, and in that case a variety of feelings will be experienced; but still the mind is simple, and it is only its relations to these different organs that are complex.”

This metaphysical reply to your objection appears to me tolerably complete; but there are more tangible and practical answers to your denial of separate faculties and organs. Dr Barclay, in his work on Life and Organization, stated arguments on this point extremely similar to those now adduced by you, and Dr Andrew Combe answered him in the Phrenological Transactions. From his paper I select the following passages. They will show also to what extent your objections have been anticipated and refuted, apparently without your knowing any thing of the matter.

“*First, Then,*” says Dr Combe, “it is an undisputed truth, that the various mental powers of man appear in succession, and as a general rule, that the reflecting or reasoning faculties are those which arrive latest at perfection. In the child, the powers of observing the existence and qualities of external objects arrive much sooner at their maturity than the reasoning faculties. Daily observation shows that the brain undergoes a corresponding change; whereas we have no evidence that the immaterial principle varies in its powers from year to year. If the brain, as a whole, is the organ of the mind, this successive development of faculties

is utterly at variance with what we should expect *a priori* ; because, if the general organ is fitted for manifesting with success one mental faculty, it, one should think, ought to be equally so for the operation of all, which we see is not the case. Observation indeed shows, that different parts of the brain are really developed at different periods of life. In infancy, according to Chaussier, the cerebellum forms one-fifteenth of the encephalic mass ; and in adult age, from one-sixth to one-eighth, its size being thus in strict accordance with the energy of the propensity of which it is the organ. In childhood, the middle and lower part of the forehead generally predominates ; in later life, the upper lateral parts become more prominent, which facts also are in strict accordance with the periods of unfolding of the knowing and reasoning powers.

“ 2d, Genius is almost always partial, which it ought not to be, if the organ of the mind were single. A genius for poetry, for mechanics, for music, or for mathematics, sometimes appears at a very early age in individuals, who, in regard to all other pursuits, are mere ordinary men, and who, with every effort, can never attain to any thing above mediocrity.

“ 3dly, The phenomena of dreaming are at variance with the supposition of the mind manifesting all its faculties by means of a single organ, while they are quite consistent with, and explicable by, that of a plurality of organs. In dreaming, the mind experiences numerous vivid emotions, such as those of fear, joy, affection, arising, succeeding one another, and departing without control from the intellectual powers ;—or, it is filled with a thousand varied conceptions, sometimes connected and rational, but more frequently disjointed and absurd, and all differing widely from the waking operations of the mind, in wanting harmony, consistency, and sense. These phenomena harmonize remarkably with the notion of a variety of faculties and organs, some of which, being active, would communicate these ideas and

feelings which constitute a dream, while others remaining asleep would, by their inactivity, permit that disordered action which characterizes the pictures formed by the fancy during sleep.

“ Were the organ of mind single, it is clear that all the faculties should be asleep or awake to the same extent at the same time ; or, in other words, that no such thing as dreaming could take place. Somnambulism, although in itself a species of dreaming, affords a still stronger illustration. In that state, one or more of the external as well as internal senses are awake, while the others are dormant. In this instance we *see* that the organs asleep and awake are different, as when a person walks with his eyes shut ; but let us suppose that they were as much hidden as the brain, would any man infer from the phenomena, that sight, smell, taste, and voluntary motion, could be exercised by one and the same organ, when he finds all of them in different states and degrees of intensity in one individual at the same time ? Never. Then, on what principle does any one draw a different inference from similar phenomena, when the internal faculties and organs are in question ?

“ At present, however, it is chiefly to the admitted phenomena of what are called Partial Idiocy and Partial Insanity that I am anxious to direct your attention ; because these states of the mind are so plainly and strongly in contradiction with the notion of a single organ of mind, that Pinel himself, no friend to Phrenology, asks if their phenomena can be reconciled to such a conception.

“ Partial Idiocy is that state in which an individual manifests one or several powers of the mind with an ordinary degree of energy, while he is deprived to a greater or less extent of the power of manifesting all the others. Pinel, Haslam, Rush, Esquirol, and, in short, every writer on insanity, speaks of the partial development of certain mental powers in idiots ; and Rush in particular not only alludes to the powers of intellect, but also to the partial possession

of the moral faculties. Some idiots, he observes, are as remarkable for correct moral feelings as some great geniuses are for the reverse. In his *Traité du Goitre et de la Crétenisme*, Fodéré thus speaks, p. 133 :—‘ It is remarked, that, by an *inexplicable singularity*, some of these individuals (cretins), endowed with so weak minds, are *born* with a particular talent for copying paintings, for rhyming, or for music. I have known several who taught themselves to play passably on the organ and harpsichord ; others who understood, without ever having had a master, the repairing of watches, and the construction of some pieces of mechanism.’ He adds, that these powers could not be attributed to the intellect, ‘ for these individuals not only could not read books which treated of the principles of mechanics, but *ils étaient déroutés lorsqu’on en parlait et ne se perfectionnaient jamais.*’ It must be observed also, that these unfortunate individuals differ very much in the *kind* as well as quantity of mental power possessed. For example, an instance is given by Pinel of an idiot girl who manifested a most wonderful propensity to imitate whatever she heard or saw, but who displayed no other intellectual faculty in a perceptible degree, and never attached an idea to the sound she uttered. Dr Rush particularizes one man who was remarkable for his religious feelings, although exceedingly deficient in intellectual power, and other moral sentiments ; and among the cretins, many are to be found who scarcely manifest any other faculty of the mind except that of Amativeness. The above quotation from Fodéré also illustrates this fact. One is all kindness and good nature, another quarrelsome and mischievous. One has a lively perception of harmony in music, while another has none.

“ It ought also to be observed, that the characteristic features of each particular case are strictly permanent. The idiot, who to-day manifests the faculty of Tune, the feeling of Benevolence, of Veneration, or of Self-esteem, will not to-morrow, nor in a year, change the nature of his predominant manifestations. Were the deficiency of the single organ the cause of idiocy, these phenomena ought not to appear ; for the general organ being able to manifest one fa-

culty, ought, according to the circumstances in which the individual is placed, to be equally able to manifest all others, whose activity may be required, and thus the character of the idiocy ought to change with every passing event, which it never does. Fodéré calls these ‘inexplicable singularities,’ and, no doubt, on his and Dr Barclay’s theory they truly are so. To the Phrenologist, however, they offer no difficulty, for they are in perfect harmony with *his* views. The difference in the *kind* of powers manifested in cases of partial idiocy, between the capacity for mechanics, for instance, and the sentiment of Veneration, Self-esteem, or Benevolence, is as great as between the sensations excited by the perception of a sound, a taste, or a smell. To infer, therefore, that one organ serves for the manifestation of all these faculties, is really much the same in point of logic as if we were to suppose all the external senses to communicate with the mind through the medium of only one nerve, in spite of the facts of many individuals being blind who are not deaf, or deaf and still able to see and smell.

“Although partial idiots manifest one or more faculties more powerfully than others, yet they seldom or never manifest any with the energy of a sound mind. Consequently, according to the phrenological system, we ought in such cases generally to find the brain defective in size. Now, Pinel, and many other opponents, inform us, that this is precisely the case; and in the course of my own observations, both on the Continent and in this country, I have found the same fact to hold good in a considerable number of cases. It does not always occur, because, although small size is a frequent cause of idiocy, it is by no means the only one. I may farther mention, that Phrenologists, by *actual observation*, have found in idiots those parts of the brain most fully developed which corresponded to the organs of the faculties most strongly manifested by them; and observation also has, in some instances, shown the entire absence of those convolutions which form a part of the organs of

certain faculties in which they were deficient. Indeed, by comparing the brains and mental manifestations of some idiots with those of healthy individuals, the conviction of a plurality of organs is almost forced upon the mind by the evident and distinctive characteristics of each. In the collection of the Society, there is a cast of the brain of an idiot girl, in which no trace of certain convolutions, which in the ordinary state indicate the development of the organs of *Causality*, can be perceived, while others are distinctly recognisable. I have also seen in the possession of Dr Spurzheim a cast of a brain in which the organs of *Veneration* were wanting, and a deep hollow existed in the corresponding situation.

“ We come now to the consideration of Partial Insanity, or that state in which one or more faculties of the mind are diseased, without affecting the integrity of the remainder. This state, which is also known by the name of Monomania, appears equally with the former to exclude the possibility of one organ executing the functions of all the mental faculties; for the argument constantly recurs, that if the organ be sufficiently sound to manifest one faculty in its perfect state, it ought to be equally capable of manifesting all,—which, however, is known to be in direct opposition to fact. Having, in a former paper “ On Insanity,” as illustrated by Phrenology, laid before the Society a great variety of cases connected with the point under discussion, I shall on the present occasion confine myself to the statement of a very few instances, merely in illustration of the proposition.

“ Of *folie raisonnée* Pinel thus speaks :—‘ Hospitals
 ‘ for the insane are never without some example of mania
 ‘ marked by acts of extravagance, or even of fury, with a kind
 ‘ of judgment preserved in all its integrity, if we judge of it
 ‘ by the conversation ; the lunatic gives the most just and
 ‘ precise answers to the questions of the curious ; no incoherence of ideas is discernible ; he reads and writes letters as
 ‘ if his understanding were perfectly sound ; and yet, by a
 ‘ singular contrast, he tears in pieces his clothes and bed-covers, and always finds some plausible reason to justify his

‘ wandering and his fury. This sort of mania is *so far from rare*, that the vulgar name of *folie raisonnante* has been given to it.’—P. 93. A very striking instance of furious mania, with integrity of intellect, will be found, quoted from Pinel, in the Preliminary Dissertation, and which it is unnecessary for me to repeat. I shall, however, add another equally interesting case from the same author. ‘ On ne peut concevoir la nature d’une certaine aliénation, qui est comme un mélange de raison et d’extravagance, de discernement, et d’un vrai délire, *objets qui semblent s’exclure réciproquement.*’ ‘ One lunatic,’ he continues, ‘ whose malady is of seven years’ standing, is perfectly aware of his state, and forms as sound a judgment of it as if it were a thing which did not immediately concern himself. He tries to make efforts to free himself from it; but, on the other hand, he is convinced that it is incurable. If any one remarks the incoherence in his ideas in his talking, he readily acknowledges it, but answers, that this inclination overpowers him so much, that he cannot but submit. He adds, that he does not guarantee the soundness of the judgments which he forms, but that it is not in his power to rectify them. His understanding is much more altered in another respect, that he believes himself above all ordinary rules; and he thinks, that if he once resolved to approximate to other men in his conduct, he must begin by doing most extraordinary things, from which the greatest evils and even atrocities would result to himself. He believes, for example, that if he wiped his nose, that organ would remain in his handkerchief; that if he shaved himself, he must of necessity cut his throat, and that, at the first attempt to walk, his legs would break like glass. He sometimes subjects himself to rigorous abstinence for several days, under the impression, that if he took aliments, they would suffocate him. What are we to think of an aberration of intellect so regular and so singular?’—Page 94.

“ It would be easy for me to multiply such instances as these of the partial affection of the mental faculties, but it is needless to occupy your time with more, and the above are amply sufficient to show the nature and bearing of such cases. Here again the difficulty recurs of reconciling such facts with the idea of one organ executing all the functions of the mind. How comes that organ to be able to manifest one, but *not all* the faculties? or, How does it happen that these affections retain the same characteristic features

throughout? That the patient, who labours under religious melancholy is found the same to-day as yesterday, and will be found the same to-morrow, for a month, or for a year? or how does it happen that a person may be insane, and yet aware of being so? If the single organ were affected, surely all the faculties of mind, of which it is said to be the instrument, ought *in every case* to be equally deranged, and the patient ought to pass in one moment from an abyss of despondency to the abodes of bliss, from the state of listless apathy to that of demoniacal furor. We may be told that this is sometimes found actually to be the case, and no doubt it is so; but it is far more rare than the other state, and is easily explained on the phrenological principles; for, in such cases, the whole brain, including of course *all* the organs, is diseased. This state, therefore, affords a true picture of the nature of insanity, such as it would *necessarily* be in every instance, if the organ of mind were single. It must strike every one who has been at all in the habit of seeing cases of insanity, or of reading histories of them in books, that there is scarcely a single case to be met with which is, I do not say explained by, but even consistent with, the division and functions of the faculties assigned by the metaphysicians. Pinel, Crichton, and many other very eminent and very philosophical men, have laboured to reconcile some species of insanity to the metaphysical systems, which they had severally adopted; but, with all their genius, and with all their unwearied industry, they have hitherto laboured in vain. Whereas, not a single instance will be found which is in contradiction with the principle of a plurality of organs, nor even, as far as I am aware, with the existence of such organs as we consider already ascertained.

“ Besides the phenomena of idiocy and insanity, there is also another class of facts (to which however I shall only allude) equally at variance with the supposition of a single organ of mind, viz. partial injuries of the brain, which are

said to have occurred without injury to the mental faculties. Having in a former communication to the Society examined these cases in detail, I need not repeat them, but merely observe, that if every part of the brain is concerned in every mental act, it appears strange that all the processes of thought should be manifested with *equal success*, when a great part of the brain is injured or destroyed, as when its whole structure is sound and entire. If the fact were really as here stated, the brain would form an exception to the general laws of organic structure ; for although a part of the lungs may be sufficient to maintain respiration, or a part of the stomach to execute digestion, in such a way as to support life, there is no instance in which these functions have been as successfully performed by impaired organs as they would have been by lungs and stomach in their natural state of health and activity. The Phrenologists are reduced to no such strait to reconcile the occurrence of such cases with their system ; for as soon as the principle of a plurality of organs is acknowledged, they admit of an easy and satisfactory explanation.

“ From the preceding considerations, then, it appears, that any theory, founded upon the notion of a single organ, is uniformly at variance with all that is ascertained to be fact in the philosophy of mind ; and that, on the other hand, the phrenological principle of a plurality of organs, while it satisfactorily explains *most* of these facts, is consistent with *all* of them. Its truth is thus almost demonstrated, not by far-fetched or pretended facts, which few can verify, but by facts which, to use Dr Barclay's own expression, daily ‘ obtrude themselves upon the notice of the senses.’ This principle, indeed, bears on the face of it so much greater a degree of probability than the opposite one, as to have long since forced itself on the minds of many inquirers. Fodéré himself, a very zealous opponent of Phrenology, after recapitulating a great many reasons similar to those already mentioned, which had

been employed by philosophers antecedent to Gall and Spurzheim, for believing in a plurality of mental organs, is constrained to admit, that “this kind of reasoning has been employed ‘*par la plupart des anatomistes,*’ from the time of Galen down to those of our own day, and even by the great Haller *qui éprouvait le besoin d’assigner une fonction à chaque département du cerveau,*” &c. Pinel also, (in the article “Manie,” in the *Encyclopedie Methodique*,) after relating some cases of partial insanity, asks, “*si tout cet ensemble de faits peut se concilier avec l’opinion d’un siège ou d’un principe unique de l’entendement.*” If, then, the majority of anatomists, for the last 2000 years, and such illustrious physiologists as Haller, and the others above referred to, were led to the belief of a plurality of mental organs, by a perception of the contradiction and inconsistency existing between the phenomena, and the supposition of the whole brain being the single organ of mind, I cannot be far wrong in saying, that the latter notion, although it may be adopted by Dr Barclay, so far from being self-evident, appears so improbable as to require even stronger facts to prove it than the phrenological view.”—*Phren. Trans.*, pp. 413—426.

But let us return to the reasons urged by you, for denying a plurality of faculties and organs:—“By the example of the “external senses and their known organs,” you say, “it is no doubt proved, that certain faculties or states of the mind have material organs; and why, it may be asked, should it not be inferred that other faculties have them also?”—This is a very fair question; and you answer, *1st*, That we believe the “functions of seeing and hearing, &c. to be carried on by material organs, *only* because we *know* and *feel* that they are so.” Now, you *know* that you see by the optic nerve only, because you have been told so, or have observed the effects of injuries of it on other men; but I deny that you *feel* its functions at all. In fact, Magendie,* to whom you refer as an authority, has recently stated reasons for doubting whether the optic nerve is at all connected with vision,—a point which could not, by any possibility, be open to question, if we had an intuitive consciousness of its functions. You pro-

* Compend. of Physiol., Milligan’s Translat., 2d edit., p. 48.

ceed,—“ And we do *not* believe that the mind performs its “ other functions by a like machinery, *because we do not know “ or feel* any thing analogous in their operations.”—If I am correct in the preceding reply, it follows, that if you choose to pursue *the same means* to discover whether “ the mind performs its other functions by a like machinery,” you may come to *know* that men love their children by a “ bump on “ the back of the head,” just as they hear by the auditory nerve. It is not the fact that men *feel* either the one or the other. If you do not incline to believe on testimony, or to practise a course of observation to find out the existence and functions of the “ internal machinery,” you must, of pure necessity, remain altogether uninformed on the subject; but you would have remained equally uninstructed in regard to the organs of the external senses, if you had as resolutely rejected these means of information. Indeed, it is amusing to observe your inconsistencies. In p. 258, in speaking of the eyes, ears, and touch, you say, that “ *anatomy and experiment* show farther, that the sensibility of these organs depends on the *nerves* which belong to them.”—A little before you referred this knowledge to consciousness.

“ If,” (you continue,) “ the mind, in comparing or resenting, “ made use of certain organs in the head, just as it does in hearing “ and seeing, we cannot but think that the fact would be equally certain and notorious; but, as we know or feel nothing at “ all analogous, we cannot believe that any thing of the kind “ takes place.”—Imagine for a moment, that a reviewer of the days of Galileo had objected to the doctrine of the revolution of the globe, “ that if the earth did turn on its axis, we cannot but think that this would have been certain and notorious; but, as we know or feel nothing at all analogous, “ we cannot believe that any thing of the kind takes place,” how would you have despised his weakness? The fact which you dispute lies out of the region of consciousness as much as the revolution of the globe; and if you will not condescend to discover it by the exercise of your understanding, you must continue unconvinced of its truth. The analogy of the *senses* is against you.

Your second answer is, that “all the organs which we actually know to be used by the mind are used to connect it with material and external objects; and indeed it is difficult for us to conceive how we could ever have become acquainted with such objects, except by means of a material apparatus in our living bodies. *But the other functions of mind do not so connect us with matter*; and therefore there is not only no such reason for supposing their existence, but there is a corresponding difficulty in the conception.”—P. 262. I must here again refer you to the well-known effects of wine, opium, and nitrous oxide gas, on the mental manifestations. You who assert, “that there is *not the least reason to suppose that any of our faculties*, but those which connect us with external objects, or direct the movements of our bodies, *act by material organs at all*,” (p. 293.) are certainly called upon to explain how an immaterial principle can be excited to activity, hurried away in ungovernable ecstasy, or laid low in a state of suspension and debasement, by means of such material substances as are here enumerated.

But, to proceed with your answers, you say, “*3dly*, And this is what chiefly concerns our immediate argument, all those functions which operate through the organs of sense are of a *definite and peculiar nature*, and so totally unlike those which the Phrenologists would furnish with like instruments, as to make the inference of their being actually so furnished in the highest degree improbable and extravagant.”—In part of this statement, I cordially agree with you, viz. that the functions of the senses are of a *definite and peculiar nature*, and that the functions of the internal organs must be equally definite and precise, otherwise they cannot be supposed to exist; accordingly, I am quite ready to peril the cause of Phrenology upon the fact, that Hope is as different from Fear, Benevolence from Combativeness, Self-esteem from Veneration, Tune from Causality, as Seeing is from Hearing; and that all these feelings, emotions, and intellectual powers, are also as precise in their nature as the senses. No doubt, you confound and confuse the phrenological faculties in a very ingenious and imposing manner; but you do not cite the recorded descriptions of them, and prove that

they are really what you represent them to be. With two exceptions, to be afterwards noticed, you give your own account of the faculties, and pass it off for mine. It is necessary only to compare the work reviewed with your pages to be convinced of this.

You deny that the phrenological faculties are primitive principles of mind, or distinguishable from each other. Let us inquire, then, what other philosophers have said regarding these powers. As to

Amativeness, You admit that "injuries of the *cerebellum* generally seem to affect this propensity," (p. 314.) and of course cannot well dispute that it is a distinct feeling. Mr Stewart admits it. (Outlines, p. 82.)

Philoprogenitiveness.—This is admitted by Reid and Stewart. (Outlines, p. 99.)

Concentrativeness is stated by the Phrenologists themselves as unascertained.

Adhesiveness is admitted by Mr Stewart in his Outlines, page 87, as "the desire of society;" by Dr Thomas Brown in Lecture 67; and by Lord Kames, in his Sketches, under the title of "an appetite for society," vol. II. p. 153.

Combativeness is admitted by Dr Reid, and by Mr Stewart (Outlines, p. 105.), under the name of "*sudden resentment*;" and Dr Thomas Brown gives a beautiful and accurate description of it, under the name of "*instant anger*," vol. III. p. 324. Lord Kames treats of it under the name of "*courage*," vol. I. p. 42. 48.

Destructiveness.—This propensity is admitted by Lord Kames, under the name of "*an appetite for hunting*," vol. I. p. 86; and "*the principle of malevolence*," vol. II. p. 178, and by Dr Brown, Lect. 72.

Constructiveness.—This is not adverted to by metaphysicians as an original principle; but by writers on insanity it is generally recognised. (See the citation from Fodéré, p. 21 of this Letter.)

Acquisitiveness.—This is disputed by Mr Stewart and Dr Brown, but admitted by Lord Kames under the name of “*a sense of property*,” and as “*an appetite for storing up things of use*,” vol. I. p. 123. In the “*System of Phrenology*,” p. 139, I have cited Esquirol, Acrel, Dr Rush, and the “*Journal de Paris*,” as describing its diseased manifestations.

Secretiveness is very accurately described by Lord Bacon in his essay “*On Cunning*.”

Self-esteem.—Dr Reid and Mr Stewart, (Outlines, p. 90,) treat of this sentiment under the designation of the “*Desire of Power*.” Dr Thomas Brown calls it “*Pride*,” and defines it as “*that feeling of vivid pleasure which attends the consciousness of our excellence*,” vol. III. p. 300. Lord Kames refers to it as the “*Sense of Dignity*,” vol. I. p. 116; and again under the name of “*Pride*,” vol. I. p. 344.

Love of Approbation.—This sentiment corresponds to the “*Desire of Esteem*” of Dr Reid and Mr Stewart, and to the “*Desire of Glory*” of Dr Thomas Brown. Lord Kames calls it, “*the Appetite for Praise*,” vol. II. p. 192.

Cautiousness is described by Lord Kames with perfect correctness under the name of “*Fear*.” “*All weak animals*,” says he, “*are endowed with a principle of fear, which prompts them to shun danger; and fear, THE FIRST PASSION DISCOVERED IN AN INFANT, is raised by every new face; the infant shrinks, and hides itself in the bosom of its nurse*,” vol. II. p. 177. Dr T. Brown ranks “*Melancholy*” among the primitive emotions, which is one of the effects of this faculty in a state of constant but not violent activity. In all works on insanity, “*Melancholy*” is admitted in the classification of mental diseases.

Benevolence is admitted by Reid, Stewart, and by Brown, Lect. 59.

Veneration is treated of by Lord Kames as “*a Sense of Deity*,” vol. IV. p. 201. It is not adverted to as an original principle by Stewart, Reid, or Brown; but “*Piety*,” as

a distinct sentiment or affection, is recognised by hundreds of authors on human character, from Virgil downwards. Esquirol, and other writers on insanity, describe its diseased states.

Hope is adverted to as a primitive principle by Stewart. Outlines, p. 232.

Ideal corresponds to Lord Kames' "*Senses of Grace and Taste*, vol. I. p. 196; to Dr Thomas Brown's "*original Emotion of Beauty*," vol. III. p. 134—5; and authors on insanity describe its diseased affections.

Wonder is noticed by Dr Adam Smith (*History of Astronomy*, p. 2), as a sentiment; Dr Thomas Brown admits it as an *original emotion*, vol. III. p. 59; and Lord Kames expressly mentions it as an original feeling of the mind.

Conscientiousness corresponds to the moral sense or emotion of the metaphysicians. Cudworth, Hutcheson, Kames, Reid, Stewart, and Brown, all admit it. Lord Kames says, "*the moral sense is born with us*, and so is taste; yet both "*of them require much cultivation*," vol. I. p. 196; and the diseases of it are described in works on insanity.

Firmness is not described by the metaphysicians; but firmness, perseverance, obstinacy, stubbornness, are recognised by many authors and observers as fundamental traits of character, and these are all referable to this faculty.

Individuality—higher and lower—which you define to be "*an instant and rapid observation and disentanglement of fleeting events, or complicated appearances*," (p. 309), corresponds nearly to the "*desire of knowledge*" of the metaphysicians. Lord Kames speaks of "*an appetite for knowledge*," vol. II. p. 192.

<i>Form,</i> <i>Size,</i> <i>Weight,</i> <i>Colouring,</i> <i>Locality,</i>	}	These are not recognized by metaphysical writers.
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Order corresponds to Lord Kames's sense of "*Order*," vol. IV., p. 125, and of "*Symmetry*," vol. I., p. 116.

Time, } These are not recognized by metaphysicians.
Tune, }

Language is admitted by Mr Stewart "as an auxiliary faculty and principle," (*Outlines*, p. 68); and Dr Thomas Brown's power of "*Simple Suggestion*" includes the whole, from Individuality downwards.

Comparison.—Malebranche and Lord Bacon have both discriminated a "radical distinction" betwixt minds; "that some have greater power, and are more fitted for the observation of the *differences*, others for the observation of the *resemblances* of things." (*Quoted in System of Phrenology*, pp. 354—5.) This power of observing "*resemblances*" is Comparison.

Causality.—This and Comparison correspond to the power of "*Relative Suggestion*" of Dr Thomas Brown. Lord Kames speaks of a "*Sense of Cause*," vol. IV. p. 103.

Wit is the "*Sense of the Ludicrous*" of the metaphysicians. Lord Kames admits "*a Sense of Ridicule*."

Imitation is recognized by almost all writers on the mind.

In fact, twenty of the phrenological faculties are recognized by Lord Kames alone.

To return to your objections to the phrenological faculties:—"Our perception of sounds," you say, "is quite independent of our perception of colours, odours, or tastes; and would be precisely what it is, though none of those perceptions, or the objects of them, existed in the universe. It is in truth this palpable separation and *independence* of these different classes of sensations which leads us to describe the capacity of receiving them as a separate function or faculty of the mind."—P. 263. To all this I readily accede; but when you say, that, "in this respect, the case of the imaginary faculties of the Phrenologists is not only in no degree analogous, but directly the reverse," I simply refer you to the authorities just cited, which prove, that the existence of at least seven-

tents of them, as "separate and independent classes" of emotions or intellectual powers, is actually admitted by the most accurate and profound metaphysicians of Britain.

Immediately after the passage last cited, you proceed:—"In this way it is obvious, that our knowledge of the organ (of an external sense) is *antecedent* to our knowledge of the faculty, and that it is truly by reference to the *former* that the *latter* is recognized and determined."

There is much reason to doubt the soundness of this proposition. The infant mind knows that it sees, hears, smells, tastes, and feels long *before* it knows that it has optic, auditory, olfactory, gustatory, and *sentiatory* nerves. In fact, mankind could not have assigned functions to the organs of sense at all, until after they had experienced and discriminated the sensations; because the organ, *contemplated by itself*, is a mere unmeaning mass of matter. Imagine that you were to present the ear to a man born deaf, and to desire him to describe the use of it, could he do so? and yet this is a fair and appropriate example of the possibility of discovering the faculty by *antecedently* knowing the organ.

You tell us that, in this respect also, the case of the phrenological faculties is "not only in no degree analogous, but directly the reverse. As to these, it must be admitted that we have no antecedent knowledge of the existence of any material organs; and the existence of the faculties, therefore, must be assumed on quite different *data*, if it is not rather imagined without any reason at all."—P. 263.

The order of Dr Gall's discoveries was the following. He *first* distinguished different mental talents and dispositions in his brothers, sisters, and school-fellows; *secondly*, he observed differences in the forms of their heads; *thirdly*, he ascertained that the forms indicated particular developments of brain; and, *lastly*, he ascertained, by extensive observation, that particular forms and particular talents or dispositions, were concomitant in all sane and healthy individuals. This is exactly analogous to the real method with the senses. We first know that we see, and then, "by anatomy and experiment," discover the connexion of the optic nerve with this operation. After the principle of distinct organs is de-

terminated, we may infer, that a particular unappropriated part of the brain *is an organ*, before we know its functions; but this knowledge does not enable us at once to designate its uses.*

Near the beginning of your article the following sentence occurs:—"If it were asserted that every man detected cheating at play would be found to have the figure of a nine of diamonds in the transverse section of the nail of his great-toe, we suspect there are not many people who would think it worth while to verify the fact by experiment."—P. 256; and you insinuate by this, that it is equally idle to look for the organs of the mental faculties in the brain. There are three distinctions, however, between the cases, which are worth noticing. In the *First* place, it is a well-established principle in physiology, that *different* functions are never performed by the *same organ*. The optic nerve does not both see and hear; and we already know, that the great-toe performs a certain function,—that of muscular motion,—distinct from cheating at cards. *Secondly*, the *brain* has no ascertained function, if it is not the organ of mind. Dr Roget, your fellow-labourer in the refutation of Phrenology, says, that "the brain is *still as incomprehensible in its functions* as it is subtile and complex in its anatomy."—(Art. *Cranioscopy* in Sup. to Encyc. Brit.) *Thirdly*, Consciousness localizes the mind in the head, although it does not reveal what organs are in the interior of the skull; and as the brain is found, by observation, to occupy that cavity, there are much better reasons, even *a priori*, for looking for the organs of mind in the encephalon than in the nail of the great-toe.

The next objection is, that "so far from supplying original, definite, and independent impressions, the greater part of the phrenological faculties presuppose the existence of such

* You have one merit, however, that of consistency in your positions, which it is but fair to acknowledge. You maintain, that knowledge of the organ must precede knowledge of the faculty; but as you admit some faculties in the mind of which you do not know the organs, you very properly deny that they have organs at all. This, at least, is consistency in error.

“impressions, and seem to have little other function than to modify or direct the functions of other faculties. Thus, Love of Approbation presupposes an habitual communication of sentiments with other men ;—Veneration, a custom of observing and comparing the powers and qualities of different beings ;—Acquisitiveness, the general development of the idea of property ;—and Cautiousness, an experience of the occasions and consequences of many forms of danger.”—P. 263.

I admit the soundness of the greater number of these observations ; but what then ?—Do not the eyes presuppose light, and objects to be seen,—the stomach hunger, and objects to be eaten,—the horns of the buffalo enemies to be overcome, and the claws of the lion prey to be caught and devoured ? and are we to infer from this, that these different instruments are not primitive institutions of nature, but fashioned by the animals themselves, after the occasions for using them have occurred ? If the Creator framed man for the obvious purpose of living in society,—of comparing himself with other beings,—of subsisting upon property, and of occasionally encountering dangers, what could be more reasonable than to bestow on him, in anticipation of these circumstances, the primitive faculties and organs to which you here object ? Could he make these for himself *after* he came to need them, or ought the work of creation to have proceeded piecemeal, each faculty being supplied for the first time only when a demand was made for its services ?

You enter into a train of gratuitous assertion and confused argument to establish the *unreasonableness* of admitting several of the phrenological faculties as primitive principles of mind. I might simply refer to the authorities already cited, which show that principles precisely similar to by far the greater number of them have been recognized by the profoundest metaphysicians of the present and preceding ages, and, on this account, doubt whether your *dicta* on this subject should be received in opposition to the opinions of so many distinguished men. But it may be worth while briefly to examine a few of your positions, and to judge of them by their intrinsic merits.

You say that “ *our old philosophers were all pretty well*

“ *agreed, that it was the same principle (namely Benevolence),*
 “ *that was, in every case, at the bottom of our regard and affec-*
 “ *tion for sentient beings of all descriptions ; though it was va-*
 “ *riously modified by a consideration of the different qualities of*
 “ *the objects to which it was directed, and the different relations*
 “ *in which they might happen to stand to us ; and when their*
 “ *attention was called to the distinctions that might be pointed*
 “ *out between the kind of love they bore to their children and*
 “ *that they felt for their parents, or the attachment they cherish-*
 “ *ed to their young female friends, as compared with their an-*
 “ *cient male ones,—or to the worthies of their own country and*
 “ *those of foreign lands,—or to inferiors and superiors of their*
 “ *own or of other races, they thought all this pretty well explained*
 “ *by saying, that it was the GENERAL BENEVOLENT FEELING*
 “ *modified, in the case of children, by a sense of the weakness,*
 “ *innocence, and dependence of their condition ; in the case of pa-*
 “ *rents, by respect for their experience and authority, and grati-*
 “ *tude for the obligations they had conferred ;—in the case of*
 “ *young women, by emotions of sex ;—of our own countrymen,*
 “ *by associations of patriotic partiality,” &c.—P. 265.*

Now, in the first place, it is not true that the old philosophers gave any such explanation as is here laid in their names. They admitted sexual love, love of children, and desire of society, as distinct principles from Benevolence ; and you are not supported by them in asserting that all these are mere modifications of one general benevolent feeling. But, in point of fact, you only *intend* to maintain this doctrine, and do not in *reality* do so. The benevolent feeling, you say, is modified ;—by what ?—*by itself*,—if there be only one general feeling.—But this is not what you allege ;—it is modified, you say, in the case of children, by “ *a sense of weakness*,” (Philoprogenitiveness) ; in the case of parents, by “ *respect for their experience and authority*,” (Veneration) ; in the case of young women by “ *emotions of sex*,” (Amativeness) ; of our own countrymen, “ *by associations of patriotic partiality*,” (Adhesiveness). All these modifying feelings then must necessarily subsist *distinct*, not only from *Benevolence*, but from *each other*, otherwise there is no sense in your words. The phrenological analysis of these mental affections is, that they arise from Benevolence, acting in combination with the other faculties now specified ;

and this is precisely your doctrine also, if you distinctly understood it yourself.

On page 264 you say, our love, “considered simply as love, may be strong or weak, sober or frantic, grave or gay. All that depends, of course, upon the shape and size of its own peculiar organs; but its *constancy* is the concern of an entirely different faculty, which has a goodly organ of its own in another region of the skull, and has no more connexion with it, physically or metaphysically, than smelling has with feeling.” All this you are pleased to designate as a strong case of absurdity. But on p. 265, after the observations just cited about love of children, love of parents, love of young women, &c., you continue,—“With regard to the constancy of these attachments, again, that was generally supposed to depend *partly* on the *judgment* or *deliberation* with which they had been formed, and *partly* on what might be called the *firmness* or *gravity* of the character to which they belonged.”—P. 265. Now, can any thing be plainer than that here you yourself admit the constancy to depend on something *different from the affections themselves*?—It depends, you say, “partly on judgment,” and “partly on *firmness* or *gravity* of character:” and, if so, how can you possibly charge the Phrenologists with absurdity for saying, that constancy in love depends on Adhesiveness, acting along with Intellect, directing it to proper objects, and with Firmness, which produces steadiness or gravity of character? Does it not afford a strong presumption in favour of Phrenology, that, whenever you write sense concerning the mind, you fall, by inevitable necessity, and altogether unknowingly to yourself, into an exact accordance with its doctrines? Will you favour me by now reading p. 266 of the Review, commencing at the top, and ending two-thirds down? That passage certainly carries a sting; but if it does not prick its author, it is innocuous; for it has not touched the Phrenologists.

Memory is the next topic of your animadversions. You maintain that there is such “a thing as a good memory in general;” and are very severe upon the phrenological theory of this function of the mind. Your doctrines, however, are so utterly disowned by experience and disproved by

facts, that I reckon it a mere waste of words to refute them. The phrenological doctrine is, that Memory is merely a mode of activity of the various intellectual faculties; it "implies a new conception of impressions previously received, attended with the idea of past time, and consciousness of their former existence, and it follows the order of the events as they happened in nature. Each organ will enable the mind to recall the impressions which it served at first to receive. Thus, the organ of Tune will recall notes formerly heard, and give the memory of music. Form will recall figures formerly observed, and give the memory of persons, of pictures, or of crystals, and produce a talent for becoming learned in matters connected with such objects. Individuality will give the memory of facts, and render a person skilled in history, both natural and civil. A person in whom Causality is powerful will possess a natural memory for metaphysics. Hence, there may be as many kinds of memory as there are Knowing and Reflecting Organs. As the recollection of facts and occurrences is what is commonly meant, in popular language, by a great memory, individuals so gifted will generally be found to possess a good development of Individuality, and probably of Language to express them."—*System of Phrenology*, p. 393.

I presume you are aware that Dr Thomas Brown, no mean authority in metaphysics, has done away with Memory as a general faculty, and substituted for it his principles of relative suggestion. As to the organs, again, Dr Watts seems to have anticipated, by a very acute conjecture, the real philosophy of Memory. He says, "It is most probable that those very fibres of the brain, which assist at the first idea or perception of an object, are the same which assist also at the recollection of it; and then it will follow that the memory has no special part of the brain devoted to its own service, but uses all those in general which subserve our sensation, as well as our thinking and reasoning powers."—P. 18.

You proceed:—"It follows by necessary consequence, that it is by the nose we *remember* smells, and by the eye that we have memory of colours," and you then exclaim, "Can it really be thought necessary to inquire into the alleged *proofs* of propositions so manifestly preposterous?" You might as well have said that it is by the legs we remember a walk. But would any person reading your last remark suppose that the following sentence occurs in the work you are reviewing?—"Whatever perceptions or impressions received from external

“ objects can be renewed by an act of recollection, *cannot depend exclusively upon the senses* ; because the organs of sense “ are not subject to the will, and never produce the impressions “ which depend upon their constitution, except when excited by “ an external cause.”—*System of Phrenology*, p. 262.

You first object against Phrenology, that its faculties are too numerous, and then abuse it because they are too few. The re-statement of a simple proposition in physiology will suffice in answer to all you advance on these topics. Different functions are never performed by the same organ, and hence there are distinct nerves for hearing, seeing, smelling, tasting, feeling ; and you seem also to have heard of the discovery which Dr Spurzheim predicted before it was made, that there are nerves of voluntary motion apart from those of feeling ; and you half admit Amativeness to be connected with the cerebellum. Follow out this principle then, and you will arrive at sound conclusions. There must be a distinct organ for every separate and primitive mental affection, however great or small the number may be. The number and nature of them is determined by the Creator ; and even the Editor of the Edinburgh Review makes but a sorry figure in arraigning the wisdom of His institutions. If the same nerve does not both see and hear, neither is it probable that the same part of the brain will feel both Benevolence and Hatred. Whenever, therefore, you are able to point out clearly and definitely, an independent mental principle for which no organ has been discovered, you are certainly entitled to say that the phrenological system is still defective, which, you will observe, we also distinctly admit ; or, on the other hand, if you point out a part of the brain which bears no relation in its size to the vigour of any known faculty, you are equally authorised to designate this as an organ of which the functions are not discovered.

You, however, say, that, “ If a separate faculty and organ “ is insisted on for every separate and distinct *perception or idea*, (this is *your* statement, and not that of the Phrenologists,) “ we “ really see no reason for not having an organ not only for every “ shade of colour, but for every diversity of quality by which

“ external objects are distinguished—for the smoothness of oil
 “ as distinguished from the smoothness of water—the soft-
 “ ness of silk as different from the softness of wool—or the
 “ roughness of a second-day’s beard from the roughness of
 “ a rough-cast wall. Our *thoughtful* readers,” you continue,
 “ will see at once how deep this goes into the whole theory.”

In answer, I observe, *1st*, That the Phrenologists do not assign a separate organ to each “ distinct *perception* or *idea*,” the olfactory nerve serves to smell both balm and assafoetida, because both are *smells*; and the organ of Colour to perceive both “ the red of a rose” and “ the blue of the sky,” because both are colours. *Secondly*, there *is* an organ for every *real* “ diversity of quality by which external objects “ are distinguished;” for example, there is one organ for perceiving Colour, and another for perceiving Size; and these distinct organs, so far as we can guess at final causes, appear to have been instituted by the Creator, just because the mental affections excited by these qualities are altogether distinct; the notion of the size of St Paul’s not being in any degree a modification of the notion of its colour. This may appear to you very absurd; but in point of principle it is not more so than the institution of one set of nerves to move the hand, and another set to feel with, after it is put in motion. *Thirdly*, you must have had a poor notion of the discrimination of your “ *thoughtful* readers,” when you imagined that they could not discover that “ the *smoothness*” of oil is *not a different quality* from “ the *smoothness*” of water; because smoothness is just smoothness, softness is softness, and roughness roughness, whether occurring in oil, water, or a beard.

On pages 274, 5, 6, you are facetious on the faculty of Concentrativeness; but the whole appearance of absurdity which you have given to that subject owes its existence to your erroneous representation of it. In the System of Phrenology it is stated again and again, that the faculties and organs were discovered by observation, and not invented. On page 77, under the title “ Concentrativeness,” it is said, that “ Observation proves that this is a distinct *organ*, because “ it is sometimes found large, when the organs of Philoprogeni-

"tiveness and Self-esteem, lying below and above it, are small, "and sometimes small when these are large." The ideas of Dr Gall and those of Dr Spurzheim, concerning the *faculty* connected with it, are then stated, after which my own observations are mentioned; as these differ from the ideas of Dr Spurzheim it is said. "From this and some other objections of Dr "Spurzheim, which I pass over without comment, I am convinced that he has not correctly apprehended the quality of "mind which I designate by Concentrativeness. This must no "doubt be my fault; but it affords a good reason for not prolonging disputation." The concluding paragraph is as follows:—"The leading objects of these discussions is to enable "the reader to form an idea of the mental quality, *if it be such*, "intended to be designated by Concentrativeness, so that he "may be able to decide on the function of the organ by his own "observations. It acts along with the feelings as well as with "the intellect. Abstract reasoning is not admitted in Phrenology as proof in favour of any organ of faculty; and "I have observed, that, by leading the mind insensibly to "adopt a conclusion for or against particular ideas, it produces "a tendency to seek support for opinions rather than truth, "and thereby retards the progress of accurate investigation. "The function is stated *as only probable*, and stands open for "further elucidation."—*System of Phrenology*, p. 84.

Now, in this discussion the only point given out by Dr Gall, Dr Spurzheim, and myself, as *certain*, is the existence of *the organ*; and we all state the *faculty* connected with it as undetermined. Our views regarding the *faculty* are not so irreconcilable as you seem to imagine;* but assuming, for the sake of argument, that they are at utter variance, what *conclusion* do we arrive at? Does Dr Gall say that *his* faculty is *determined*? Does Dr Spurzheim assert that a *different power* is *proved* to be connected with the organ, and do I maintain that a *third* mental quality is *ascertained* to be situated there? If we did, then you would have good ground for questioning the soundness of our observations and inductions. But the very opposite is the fact—Dr Gall states the function as unascertained, Dr Spurzheim mentions it as "only conjectural,"

* In point of fact, it has been shewn in an able Essay in the *Phrenological Journal*, vol. III., p. 191, that Concentrativeness includes Inhabitativeness, and that there is no inconsistency in the views advanced in regard to this faculty.

and I, as merely "probable;" so that the point we arrive at is, that the faculty is not at all ascertained, just because our observations do not coincide. What are we to think, then, of your fairness as a critical judge, when you select this faculty as *the only one* which you venture to describe, at length, in our own words, and represent it as a specimen of the accordance and consistency of our views upon other faculties, regarding which we are all agreed? Nothing but the spirit of partizanship, the feeling that in this contest you are a party at the bar of public opinion, struggling to maintain a position fast giving way beneath you, could have induced you to resort to such a shift.

You are particularly eloquent also on the supposed discrepancies of doctrine between Dr Gall, Dr Spurzheim, and me, about the functions of Individuality. A brief explanation will serve to place this matter in its proper light. Before a phrenological faculty and organ are regarded as finally settled, there are three points to be determined; *first*, the situation of the organ; *secondly*, the kind of mental manifestations that accompany its development; and, *thirdly*, the metaphysical *analysis* of the manifestations. In several instances, that of Wit,* for example, the first and second points are completely ascertained, while the third, being attended with greater difficulty, is open to considerable difference of opinion. Individuality stands at present in a similar situation. Phrenologists are agreed on the kind of manifestations that accompany the organs when large, and on the mental deficiencies that result from their being small; but they are not at one on the ultimate principle involved in them

In connexion with Concentrativeness, you become witty

* It is worth noticing in passing, how very little you are acquainted with the contents of the work you are refuting. In a note, p. 313 of the Review, you say, "It farther appears from the same valuable document, (Dr Spurzheim's last work on Anatomy,) that a *new organ*, entitled *Mirthfulness*, has been discovered since Mr Combe's book was written—though we cannot exactly ascertain "which of the old ones has been suppressed to make room for it." On p. 364 of the System, in treating of the organ of Wit, Dr Spurzheim's own words are quoted: "I propose the name *Mirthfulness*, or *Gayness*, to indicate the peculiar feeling of wit."

on the "natural language of the faculties." That doctrine is correctly announced by you, when you say, in derision of course, "The great practical truth is, that when any faculty "is in a state of activity, the head, at least, if not the whole "body, is moved in the direction of the external organ of that "faculty." You ridicule the statement, "that when those persons who really possess the power of Concentration, while "preparing to make a powerful and combined exertion of all "their powers, naturally draw the head and body backwards "in the line of this organ." On the assertion, that "preachers "and advocates in whom it is large, while speaking with animation, move the head in the line of Concentrativeness and "Individuality, or *straight* backwards and forwards," you remark, "this, we should humbly conceive, they must necessarily "do, if they move them *oftener than once* in either of the opposed directions." This at first sight appears not only witty, but conclusive; but it is really at variance with fact. If you will observe more narrowly than you appear to have done, you will find that there are preachers and advocates who, although they very frequently move their heads backwards and forwards, scarcely ever, by any chance, do so "in the *straight* "line." Those in whom Secretiveness predominates, in bringing the head forward, present the face at an angle to the audience, and look to the side from the corners of their eyes; they draw back the head in a sidelong direction also; those again, in whom Combativeness predominates, move the head backwards and forwards in the line of that organ; and those in whom Love of Approbation predominates, carry their heads backwards with a swinging motion, also in the line of the organ; Concentrativeness in all these cases being deficient. Such statements, I am aware, must appear to you absurd, because you have never taken the pains to observe their truth; but this is accounted for by the quotation from Dr Brown, p. 10.

You ask, "When a man seeks the applause of assembled "multitudes in the senate, on the battle-field, on the stage, "is he irresistibly moved to go to the left about, and advance the posterior curves of his cranium?" I answer no—it is only Mr Jeffrey, and not the Phrenologists, who have said so. You proceed,—"Has a proud man a natural ten-

"dency to *move* backwards?" I have not said that he has; my statement is, that he has a natural tendency "to carry *his head high and reclining* backwards."* To designate unwarrantable assumption of consequence in any individual, is it not common to say that "that man carries his head too high?" and do not very proud men, in point of fact, walk erectly, and carry their heads high? You next ask, "Are constant friends and lovers generally to be found drifting down, stern foremost, on the objects of their affections?" Certainly not; but this again is your witticism, and it is really a good one. Look at the pictures of Castor and Pollux, in which the one stands with his arm passed over the shoulder of the other, the two heads touching at a point a little behind and above the ear; or place any two persons, no matter although of the same sex, in both of whom the organs of Adhesiveness are large, in this position, and you will soon discover whether or not this is the natural attitude of attachment. It is unnecessary to proceed farther on this topic. Artists, who make it their study to observe nature, have recognised the correctness of the doctrine about natural language; and the whole ridicule with which it is invested in your pages arises absolutely from your passing off gross absurdities of your own invention for statements of mine.

On the subject of Fear and Hope, you enter into a long dissertation, chiefly a paraphrase of a passage from Hume's Essays, quoted in the "System," and arrive at the conclusion, that "*the truth is, that the two principles are substantially one and the same, and necessarily imply each other, as much as heat and cold do. The increment of the one is necessarily the decrement of the other.*" If, in the contemplation of danger, a man fears much, he, by necessary consequence, hopes little—if he hopes much, he fears little. It is no matter which form of expression is used, since they both obviously mean the same thing, and indicate exactly the same state of mind or feeling. They are the two buckets in the well, and it is not less absurd to ascribe them to different principles, than it would be to maintain that the descent of the one bucket depends on

* System, p. 161.

“ causes quite separate from that which occasions the ascent of the other :—and the superfluity of the Phrenologists in these instances, is but faintly typified by that of the wiseacre who made two holes in his barn-door, one to let his cat *in* to kill the mice, and the other to let her out.” The common edition of the story is, that the wiseacre made a large hole for the cat, and a small one for the kitten ; but let that pass, as you are not very particular in your quotations. The question is, whether Hope and Fear are one feeling or two ?

There is a maxim in philosophy, *ex nihilo nihil fit*, which, in plain English, means, that something never arises out of nothing. Cold then is not a positive substance, but the mere negative of heat ; silence is the negative of noise ; and rest the negative of motion : accordingly, cold, silence, and rest, not being entities, cannot become agents, or exhibit active qualities ; for this would infringe on the above maxim, which in philosophy is absolutely indisputable. If Fear then be the mere negation of Hope, it cannot be a positive feeling ; it can produce no effects, and excite to no actions ; or if you reverse the case, and say that Hope is the negation of Fear, then it is the mere zero of that emotion ; it is nothing in itself, and can produce no consequences. But this is altogether at variance with the real phenomena of life. Fear, when violently excited, is an overwhelming passion ; Hope, when high upon the tiptoe, is a prodigiously strong positive emotion ; and both give rise to the most extensive consequences in human affairs. Your theory is the same as that which maintains Fear to be the negative of Courage, and Courage the negative of Fear ; or that the mere absence of terror was all that constituted the heroic bravery of Nelson ; and that a man in the ecstasies of a panic experiences no positive emotion, but is only negatively brave.

With your permission I shall borrow from you the simile of the two buckets, and endeavour to apply it to better purpose than you do. I place Fear in the one bucket and Hope in the other. In the medium condition of ordinary life they hang in equilibrio ; when an object pregnant with

danger presents itself, Fear mounts up, and Hope sinks down; when an agreeable prospect appears, Fear descends, and Hope rises. You should have had only one bucket in your well, and called it Fear when at the bottom, and Hope when at the top. On page 309, you say, "What is Cautiousness, but a quick sense of danger, a most prompt and vigilant circumspection for security?" This is an excellent definition; but does it designate, as appropriately, the simple negation of Hope?

Let us next proceed to your commentary on the phrenological doctrine of the perception of Colour. In the System of Phrenology, p. 273, under the head of "Sight," the question is asked, "What, then, are the true functions of the eye?" "No organ of sense *forms ideas*. The eye, therefore, only receives, modifies, and transmits the impressions of light; and here its functions cease. Internal faculties form conceptions of the figure, colour, distance, and other attributes of the objects making the impressions, and the power of forming these conceptions is in proportion to the *perfection of the eyes and the internal faculties jointly*, and not in proportion to the perfection of the eyes alone. Hence the lower animals, although they have eyes equal in perfection to those of man, are not able to form the ideas of the qualities of bodies, which he forms by means of his internal faculties through the instrumentality of the eye, because in them the internal faculties are wanting."

Again, in treating of the organ of Colouring, it is said, that "Although the eyes are affected agreeably or disagreeably by the different modifications of the beams of light, or by colours, yet they do not conceive the relations of different colours, their harmony or discord, and they have no memory of them. Certain individuals are almost destitute of the power of perceiving colours, who yet have the sense of vision acute, and readily perceive other qualities in external bodies, as their size and form."—*System of Phrenology*, p. 296.

To this you object, that, "So far is it from being true that we do not perceive colour by the eye, that in reality it is colour, and colour alone, that is the primary object of its perceptions. What we see indeed is only light; but light is always coloured (if we include white as a colour), and the different colours are in reality but *so many* kinds of light."—P. 287. "Colour, in short, is the only quality of light by which we are ever made aware of its existence; and to say that we do not see colour by the eye, is in reality to say that *we do not see at all*; for the strict and ultimate fact is, that we

"never see any thing else."—P. 288. And again you say, "Take the case of sight first. It is true, as we have already observed, that we see nothing but colour; and accordingly, if all objects were of the same colour, both as to *shade* and intensity, we certainly should never perceive their forms by the eye."—P. 289.

There is more ingenuity in these than in many of your other objections; but still they are easily answered. It is not asserted by Phrenologists that the eye *alone* is sufficient to perceive light. The statement is, that "it only *receives, modifies, and transmits* the impressions of light;" of course, it transmits them to something else, which is stated to be the organ of Colouring. Assuming the position then, that light is colour, it will follow phrenologically, that light cannot be perceived without the joint operation of both the eye and the organ of Colouring; and, accordingly, nothing in opposition to this is stated in the phrenological works. It is expressly mentioned in the "System," p. 36, that "*every (sane) individual possesses all the organs in a greater or less degree.*" Now, suppose that in two persons the eyes are equally perfect, but that in one the organ of Colouring is very large, and in the other very small, it will follow that the *impressions* of light will be *conveyed* to both equally; but that they will excite in the former a strong and in the latter only a feeble perception of colours. You object, however, that it is impossible that the latter can distinguish *forms* readily by the eye, because his perception of colour being imperfect, and light being mere colour, he must be as deficient in general vision as in discriminating hues. I reply, that mere difference of *shade* is sufficient to enable us to perceive forms by the eye, as is proved by the arts of black-chalk drawing and copperplate printing; and that for the perception of *shades* a much *lower degree* of the combined action of the eye and organ of Colouring will suffice than for acutely discriminating the relations of colours. This may be illustrated by the parallel case of sound. It is pretty generally admitted that mere sound is different

from melody, and yet melody is nothing but sound. It is sound, however, modulated in a particular manner ; and the perception of this modulation is a *higher mental act* than the perception of simple noise. Now, suppose the auditory apparatus and the organ of Tune to be *both* requisite for the perception of melody, it will follow phrenologically, that if two individuals possess the former equally, but differ in the degrees in which they enjoy the latter, they may both perceive sounds with acuteness, while the one may in addition have a great perception of melody, and the other very little. To refute this view it will not suffice to assert metaphysically, that melody is mere sound, and that *therefore* it is absurd to say that a man can hear acutely while he is insensible to music. It is a sufficient answer to say, that the one implies a higher degree of perception than the other ; that a person may enjoy the lower, and yet be deficient in the higher degree ; and that the *fact* in nature actually is so. This, accordingly, is precisely what the Phrenologists teach in regard to colours. They maintain that perception of differences in *shades* arises from a *low degree* of combined action of the eye and organ of Colouring ; while discrimination of *colours* requires a *higher degree* of BOTH ; just as mere *sound* is perceived by a slender endowment of the auditory apparatus and organ of Tune, while a more ample portion of both is requisite for the perception of *melody*. It is therefore quite intelligible in theory how “ certain individuals, *almost* (not *altogether*, as “ you seem to assume) destitute of the power of perceiving colours, may yet have the sense of vision acute, and readily “ perceive other qualities in external bodies, as their size and “ form.” This is asserted to be a *fact* in the System of Phrenology, p. 296 ; and the explanation given is, that in them the organ of Colouring is not wanting, but small. But you do not grapple with the facts there stated, although the names and designations of several living individuals are furnished to you who are in this predicament. You pass all these over in silence ; and, as a set-off to them, favour us with a

fact of your own. It, however, is too precious and important to be dismissed without comment. In the *System of Phrenology*, p. 300, the following passage occurs:—"Mr Jeffrey, in the article 'Beauty,' already alluded to, informs us, " 'That colour is, in all cases, absolutely indifferent to the eye;' " and adds, 'that it is no doubt quite true, that, among painters "and connoisseurs, we hear a great deal about the harmony "and composition of tints, and the charms and difficulties of a "judicious colouring. In all this, however, we cannot help "thinking that *there is no little pedantry and no little jargon.*' " Speaking of the natural gamut of colours, he continues, 'We "confess we have no faith in any of these fancies; and believe, "lieve, that if all these colours were fairly arranged, on a "plain board, according to the most rigid rules of this supposed harmony, nobody but the author of the theory would "perceive the smallest beauty in the exhibition, or be the "least offended by reversing their collocation.' It is a curious fact, that the organ of Colouring in Mr Jeffrey's head is "actually depressed; and it appears that, in the usual manner "of metaphysical writers, he has conceived his own feelings to "be an infallible standard of those of human nature in general."

On this statement you make the following commentary in the *Review*:—"It is worth while perhaps to observe, that "in treating of this faculty, Mr Combe is pleased (at page 301) "to notice the case of an individual with whose speculations "on the beauty of colours he does not agree, and whose errors "on the subject he triumphantly accounts for by recording it "as a curious fact, 'that in his head the organ of Colouring "is *absolutely depressed!*' A more complete case of destitution "of the faculty could not of course be imagined; and, accordingly, the learned author proceeds most reasonably to infer, "that he must be in the condition of those unfortunate persons "who cannot distinguish dark-brown from scarlet, or buff "from orange.' Now, without meaning to call in question "the fact of the depression in his skull, we happen to *know* "that the individual here mentioned has a remarkably fine and "exact perception of colours, so as to be able to match them "from memory with a precision which has been the admiration of many ladies and dress-makers. He has also an uncommon sensibility to their beauty; and spends more time "than most people in gazing on bright flowers and peacocks' necks, and wondering, he hopes innocently, what can be the "cause of his enjoyment. Even the Phrenologists, we think, "must admit, that, *in his case*, it cannot be the predominance "of the appropriate faculty; since they have ascertained that "he is totally destitute of the organ. But this belongs properly to the chapter of evidence."

This certainly *does* “belong to the chapter of evidence;” and as one of the grand elements of credibility in a witness is consistency, I shall enter your case as an exception to Phrenology whenever you reconcile the palpable discrepancies of these statements. How could you assert in the *Encyclopædia*, that “Colour is in all cases absolutely *indifferent* to the eye,” if you were conscious, when you wrote, of possessing “an *uncommon sensibility to their beauty*?” How could you stigmatize as “*pedantry and jargon*” the doctrine of “the harmony and composition of tints, and the charms and difficulties of a judicious colouring,” and assert, “that if all those colours were fairly arranged, on a plain board, according to the most rigid rules of this supposed harmony, nobody but the author of the theory would perceive *the smallest beauty* in the exhibition, or be the least offended by reversing their collocation,” when all the time you enjoyed in yourself “a remarkably fine and exact perception of colours, so as to be able to *match them* from memory with a precision which has been the admiration of many ladies and dress-makers!!” Why, you must either have acquired a new talent since you wrote the article *Beauty*, now some ten years ago, and in that case the *organ* may have increased; or must we adopt, as the only other alternative, the conclusion which you have drawn in regard to me, in the following terms?—“We really have great difficulty in believing the author to be in good faith with us, and suspect that few reflecting readers will be able to get through ‘these statements’ without many starts of impatient surprise, and a general uneasy surmise that they are a mere exercise of intellectual ingenuity, or an elaborate experiment on public credulity.”—*Review*, p. 253.

The limits necessarily prescribed to this Letter render it impossible for me to follow you through your long and confused objections to the organs of “Size, Order, and Weight,” and to analyze and expose all the inconsistencies into which you have fallen. In the spirit of partizanship, already commented on, you omit, or very briefly notice, the faculties stated by Phrenologists as ascertained, and fix upon those which they themselves distinctly mention as

still subjects of inquiry, and represent them as fair examples of their general science. This is particularly the case with Size and Weight; the first of which is stated in the work you review to be only "*probable*," and the second as "conjectural." You omit, too, all mention of the facts by which the opinions advanced are supported; and, in short, leave no means untried to mislead your readers as to the real merits of the System. In treating of Weight, you have done great injustice to the views of Mr Simpson on that subject. His essay is printed at full length in the *Phrenological Journal*, vol. II. p. 412, and is pretty fully quoted in my work; and, with all deference to your sagacity, it is impossible to read that production, and to attend impartially to the facts by which the principles of it are supported, without being satisfied of the high probability of both faculty and organ. Phrenologists recognize the views of that paper as a valuable contribution to their science; and it will be impossible for reflecting men, who are not absolutely blinded by prejudice, to peruse it without perceiving that it is a chapter of some importance added to the philosophy of mind.

Passing over, therefore, ten pages of loose wrangling in the Review, let us approach your observations on the effects of Size in the organs, on the manifestations of the mind. You say, "Their proposition is, that their thirty-six bumps are the organs of so many separate faculties, and that the strength of the endowment is in exact proportion to the size of the bump. Now, independent of all flaws in the theory, we think it can be *proved*, by facts that admit of no denial, that this proposition *neither is nor can by possibility be true*."

"In the *first* place," you continue, "let us say a word about *Size*. That the mere bulk or *quantity* of matter, in such wonderful and delicate structures, should be the exclusive measure of their value, without any regard to their *quality* or condition, certainly must appear on the first statement to be a very improbable allegation." This is a complete misrepresentation of

the phrenological doctrine, which is, that, *cæteris paribus*, Size is a measure of power. You studiously omit the qualification of *other things being equal*, although this is constantly kept

in view by Phrenologists:—You proceed, “ We cannot help suspecting that it was nothing but the plain impossibility of ascertaining any thing as to their structure and quality that drove our dogmatic theorists upon that bold position. Their assumed organs, however, are all buried deep under skin and bone of an uniform appearance; and having nothing, therefore, but Size left to go upon (at least in the living subject), they seem to have even made up their minds to say that that was quite enough, and that nothing else was to be regarded. In the next place, however, *the proposition is no less contrary to the analogy of all our known organs than to general probability.* The grand mamma Wolf, in the fairy tale, does indeed lean a little to the phrenological heresy, when she tells little Riding-hood that she has large eyes to see her the better. But with this one venerable exception, *we rather think it has never been held before that the strength of vision depended on the size of the eye, the perfection of hearing on the magnitude of the ear, or the nicety of taste on the breadth of the tongue or palate.*”

On page 258 of the Review, you say, “ We see with our eyes, hear with our ears, and touch with our hands, or the surface of the whole body. These are facts, we think, which may be assumed without argument or explanation. Anatomy and experiment show farther, that the *sensibility* of these organs depends on the *nerves* which belong to them, on the optic and auditory nerves, for example, as to seeing and hearing, or on the nerves of touch for many other sensations.” Your real proposition, then, must be, that, with the venerable exception of grand mamma Wolf, it has never been held before that the strength of vision depends on the size of the optic nerves, the perfection of hearing on the magnitude of the auditory nerves, or the nicety of taste on the size of the gustatory nerves.

In an early part of this Letter I observed, that your objections have, in general, been anticipated by other opponents of Phrenology, and refuted before you brought them forward. The following extract from a letter written by Dr A. Combe, and published in the Edinburgh and Leith Advertiser of 18th March, 1826, will serve at once to establish this, and to answer your doctrine about the organs of sense:—“ It is a fact,” says he, “ admitted by the highest physiological authorities, and by the greatest authority of all—Nature, that the functions of the five senses are executed with a degree of acuteness and intensity exactly proportioned, *cæteris paribus*, to the development of their respective organs. Monro,

“ Blumenbach, Sæmmering, Cuvier, Magendie, Georget, and a whole host of authors, might be quoted in proof, but one is enough ; and, having Blumenbach at hand, I turn to the section on Smell, and find as follows :— ‘ *While animals of the most acute smell have the nasal organs most extensively evolved, precisely the same holds in regard to some barbarous nations. For instance, in the head of a North-American Indian, (represented in one of his plates), the internal nares are of an extraordinary size, &c.* And again, ‘ The nearest to this, in point of magnitude, are the internal nares of the Ethiopians, from among whom I have seen heads very different from each other, but each possessing a nasal organ much larger than that described by Sæmmering.’— ‘ *These anatomical observations accord with the accounts given by the most respectable travellers concerning the wonderful acuteness of smell possessed by these savages.*”

“ In like manner, Dr Monro, *primus*, no mean authority to put against a nameless pamphleteer, in treating, in his Comparative Anatomy, of the large organ of smell in the dog, says, ‘ the sensibility (of smell) seems to be increased in proportion to the surface ; AND THIS WILL ALSO BE FOUND TO TAKE PLACE IN ALL THE OTHER SENSES.’ A late French physiological writer is equally explicit. In treating of the nerves, M. Georget says, ‘ *The volume of these organs bears a uniform relation, in all the different animals, to the extent and force of the sensations and movements over which they preside. Thus, the nerve of smell in the dog is larger than the five nerves of the external senses in man.*”

A large eye too takes in more light, and a large ear more impulses of air than small ones ; so that the venerable “ Grand Mamma Wolf” really turns out to be a sounder physiological authority than the “ Oracle” of the Edinburgh Review !

The principle, that size in the organ, *cæteris paribus*, determines the power of manifestation is admitted by physiologists to apply equally to the brain. Magendie says, “ *The volume of the brain is generally in direct proportion to the capacity of the mind.* We ought not to suppose, however, that every man having a large head is necessarily a person of superior intelligence, for there are many causes of an augmentation of the volume of the head beside the size of the brain, but it is rarely found, that a man distinguished by his mental faculties has not a large head. The only way of estimating the volume of the brain, in a living person, is to measure the dimensions of the skull ; every other means, even that proposed by Camper, is uncertain.” — *Compendium of Physiology*, p. 104, edition 1826.

“ All the world knows,” you continue, “ and the Phrenologists themselves admit, that the vigour of any faculty may be improv-

“ed by exercise and education; and the strength of any propensity
 “by habitual indulgence, though these changes are not accompanied
 “by any increase in the size of the organ. But is not this admitted and most familiar fact in absolute and glaring contradiction to
 “the fundamental assumption of the System?”—P. 302.

This objection is already answered in the following passage of the “System,” of which, of course, you take no notice:—

“Suppose that two individuals possess an organization exactly similar, but that one is highly educated, and the other left entirely to the impulses of nature, the former will manifest his faculties with higher power than the latter; and hence it is argued, that size is not in all cases a measure of energy.

“Here, however, the requisite of *cæteris paribus* does not hold. An important condition is altered, and the Phrenologist uniformly allows for the effects of education, before drawing positive conclusions.* It may be supposed, that, if exercise thus increases power, it is impossible to draw the line of distinction between energy derived from this cause and that which proceeds from size in the organs, and hence that the real effects of size can never be determined. The answer to this objection is, that education may cause the faculties to manifest themselves with the highest degree of energy which the size of the organs will permit, but that size fixes a limit which education cannot surpass. DENNIS, we may presume, received some improvement from education; but it did not render him equal to POPE, much less to SHAKSPEARE or MILTON: therefore, if we take two individuals whose brains are equally healthy, but whose organs differ in size, and educate them alike, the advantages in power and attainment will be greatest in the direct ratio of the size in favour of the largest brain. Thus, the objection ends in this,—that, if we compare brains in opposite conditions, we may be led into error—which is granted; but this is not in opposition to the doctrine, that, *cæteris paribus*, size determines power. Finally, extreme deficiency in size produces incapacity for education, as in idiots; while extreme development, if healthy, as in SHAKSPEARE, BURNS, MOZART, anticipates its effects, in so far that the individuals educate themselves.

“In saying, then, that, *cæteris paribus*, size is a measure of power, Phrenologists demand no concessions which are not made to physiologists in general; among whom, in this instance, they rank themselves.”

The next objection is, that “A diseased state of the organ always makes its operations more vigorous and energetic; and no instance is mentioned in which the occasional obscurity of any faculty is referred to such a cause.”—P. 305. This assertion is at utter variance with fact. On pages 333—4 of

* Phrenological Transactions, p. 308.

the System, a variety of cases are mentioned in which disease of the organ was accompanied by obscurity of the faculty.

"The imaginary disease," you continue, "has often no other local indication but this increase of mental vigour, and is indeed, in most cases, plainly imagined or assumed merely to account for that phenomenon. It proves, at all events, that faculties may have a vigour quite incommensurate with the size of their organs—which is *precisely the reverse* of what Phrenology teaches. It proves that the state or quality of the organ, or of something else, quite independent of its size, may determine the state of the faculty, and that size, therefore, is no criterion whatever. If we find a man with a very small organ, and a very vigorous manifestation of its supposed faculty, it is, to be sure, very easy to say, that this is owing, not to the size, but the condition of the organ; but it is saying what fundamentally contradicts the whole phrenological doctrine; and though it introduces another, pretty nearly as absurd, it completely puts an end to the former."

The answer to this objection also is explicitly given in the System; but you pass it over. It is as follows:

"It is proper next to advert to certain conditions which may co-exist in the brain with size, and to attend to their effects. Power in the manifestations, and size in the organ, are, in the general case, proportionate; and when differences in size are considerable, no circumstance, consistent with health, will render the manifestations equal in power; one brain, however, may be more perfect in constitution than another, and, in consequence, may act more vigorously, although not larger in dimensions; but these differences are slight and their effects limited. Size then is not the *only* requisite to the manifestation of great mental power; the brain must possess also a healthy constitution, and that degree of activity which is the usual accompaniment of health. Now, the brain, like other parts of the body, may be affected with certain diseases which do not diminish or increase its magnitude, and yet impair its functions; and, in such cases, great size may be present, and very imperfect manifestations appear; or it may be attacked with other diseases, such as inflammation, or any of those particular affections whose nature is unknown, but to which the name of Mania is given in Nosology, and which greatly exalt its action; and then very forcible manifestations may proceed from a brain comparatively small; but it is no less true, that when a larger brain is excited to the same degree by the same causes, the manifestations become increased in energy in proportion to the increase of size. These cases, therefore, form no valid objection to Phrenology. The Phrenologist ascertains, by previous inquiry, that the brain is in a state of health. If it is not, he makes the necessary limitations in drawing his conclusions."*—P. 46.

* This subject is discussed at greater length in the Phrenological Journal, No II. p. 300.

You add to your last objection the following recondite commentary:—"In some cases our author represents the faculty as inordinately excited by disease, in persons who have the organ of very small dimensions; in others he is guilty of the *double* absurdity of leaving it to disease to produce any manifestation of the faculty, although the organ has all along been unusually large, as in the following admirable illustration of Destructiveness:—"When *excited by intoxication, the organ* sometimes becomes ungovernable; and hence arises the destruction of glasses, mirrors, chairs, and every frangible object, at the close of many a feast. Hence also the temptation, often almost irresistible, experienced by many a worthy citizen, when inebriated, to smash a lamp on his progress home. One gentleman assured me, that the lamps have appeared to him, when in this state, as it were twinkling on his path with a wicked and scornful gleam, and that he has frequently lifted his stick to punish their impertinence, when a remnant of reason restrained the meditated blow. In him, *Destructiveness is decidedly large*; but, *when sober*, there is not a more excellent person.—P. 109.

"Now," you say, "here we have, first of all, a man with a decidedly large organ, *who yet, in his sound and natural state, gives no manifestation whatever of the connected propensity*, in itself a complete falsification of the theory; but then, when disordered with drink, this naturally quiet person becomes mischievous; that is to say, he comes into the state to which drink and disorder might bring a man with a decidedly *small* organ."—P. 306.

This objection also is already answered in the System. It is there said, that "In no instance is it a matter of indifference to the talents and dispositions of the individual, whether any particular organ be large or small. If it be large, although its *abuses* may be prevented by restraint and direction imposed by the other faculties, still its presence will operate on the mind. If, for instance, large Combativeness and Destructiveness are combined with a large development of the moral and intellectual organs, the whole life may be passed without the occurrence of any outrage; and it may be asked, what effect, in this case, do the former organs produce? We shall find the answer, by supposing all the other organs to remain large, while those are diminished in size, and tracing the effects of this change;—the result would be an undue preponderance of moral and intellectual qualities degenerating into effeminacy. Large Combativeness and Destructiveness would add the elements of repulsion and aggression to such an extent, as to permit the manifestation of manly enterprise and courage. Hence, in the case supposed, these organs would be *duly performing their functions when the superficial observer would imagine them to be entirely superfluous*."—P. 450. On these principles it did not require intoxication to produce the first

manifestation of Destructiveness in the individual alluded to; and it is not true, in fact, that "drink and disorder" would bring a man with a *small* organ of Destructiveness into the state of breaking lamps.

On p. 307 you say, "A *third* and separate refutation" (alas, that *so many* refutations should be necessary!) "is suggested by "another concession, or necessary distinction, of its supporters. "There is a difference, they have been obliged to admit, between the *Activity* and the *Power* of their faculties and propensities; and size is a measure of power only, activity not manifesting itself by any peculiarity of outward configuration." In the System, it is said, that "*activity* means the *rapidity* with which the faculties may be manifested. *The largest organs in each head have the greatest and the smallest the least tendency to natural activity.*"—P. 49. You omit this statement entirely, and proceed with the question, "Is there in reality any distinction between what is here called *power* and what is called *activity*, as applied to the 36 phrenological faculties?" You dedicate two pages to the task of proving, "that we can have no other idea of the power of any faculty, than one which answers exactly to Mr Combe's definition of its activity."

You, no doubt, quote the definition of activity; but you omit the most important and practical illustrations of the difference between it and power, which, if you had inserted, would have served as a sufficient refutation of all your objections on this head. In the System it is stated, that "The doctrine, that "*power* is a characteristic of the mind, distinguishable at once from mere intellectual acumen, and also from activity, is one of great practical importance; and it explains a variety of phenomena of which we previously possessed no theory. In society we meet with persons whose whole manner is little, whom we instinctively feel to be unfit for any great enterprise or arduous duty, and who are, nevertheless, distinguished for amiable feeling and good sense. This springs from a small brain, but favourably proportioned in its parts. Other individuals again, with far less polish, inferior information, and fewer amiable qualities, impress us with a sentiment of their power, force, energy, or greatness; we instinctively feel that they have weight, and that, if acting against us, they would prove formidable opponents. This arises from great size. BUONAPARTE, who had an admirable tact in judging of human nature, distinguishes between mere cleverness and force of character, and almost always prefers the latter. In his Memoirs, he speaks of some of his generals as possessing talents, intellect, book-learning, but as still being nobody, as wanting that weight and comprehensiveness which fit a man for great enterprises; while he

“ adverts to others as possessing limited intellect and little judgment, but prodigious force of character ; and characterizes them as admirably adapted by this qualification to lead soldiers through peril and difficulty, provided they be put on the right path by minds superior to their own. MURAT was such a man ; and BUONAPARTE appears, on the whole, to have liked such officers, for they did not trouble him with thinking for themselves, while they possessed energy adequate to the execution of his most gigantic designs.”—*System of Phrenology*, p. 435.

“ *Activity* in the organs, on the other hand, gives liveliness, quickness, and rapidity ; and is a more frequent concomitant of a moderate-sized brain than of a large one. Dr SPURZHEIM thinks that long fibres contribute to activity. Moderate size of the brain, with favourable combination, and much activity, will constitute what is commonly understood by a *clever* man in ordinary life ; such an individual will form ideas rapidly, do a great deal of work, show tact and discrimination, and prove himself really a valuable and useful member of society ; but then he must not be overloaded with difficulties, or encumbered with obstacles, nor must the field in which he is called on to labour be too extensive.”—*Id.* p. 439.

“ When *power* and *activity* unite in an individual, they constitute the perfection of genius. This I conceive to have been the case in HOMER and in SHAKESPEARE. Vivacious buoyancy, ease, and fertility, arising from activity, joined with depth, strength, comprehensiveness, and masculine energy of mind, the result of great size, place these authors above all others whom the world has ever seen.”—*Id.* p. 440.

It is almost superfluous to add to these illustrations ; but as you cite instances of particular faculties, and ask what is the distinction between power and activity in them, it may be proper briefly to answer some of your inquiries. Your words are, “ When we say, for example, that a man has Destructiveness uncommonly powerful, what do we mean but that he is unusually *ready* to injure and destroy ? All men have something, it seems, of this amiable propensity ; and the only difference is, that those who have it least are the *slowest* to give way to it, and those who have it most, the *quickest*. The whole difference, therefore, is in what is here called *its activity*.” Is it true, then, that this is the only difference ? When we see represented on the stage the character of an ill-natured old woman, whose whole existence is little else than a series of manifestations of Destructiveness, can any thing be more *quick*, and, at the same time, more ludicrously *feeble*, than the flashes of ill-nature which are then exhibited ? It

is, indeed, the contrast between these qualities that forms the charm of the representation. Take, again, the example of a Meg Merrilees, uttering the most dreadful imprecations of a tremendous Destructiveness, do we not feel in this character an overwhelming *power* of passion altogether different from the activity of the other? We laugh at the one and tremble before the other; and this difference of feeling in the spectator does not arise, as you maintain, "merely from difference in the muscles of the hand or arm" of the actors, for there is no question of physical violence in either case,—but solely from difference in their mental energies. So completely is this the truth, and so distinct are the qualities of power and activity, that I would peril the decision of this point, on the fact, that the ablest representatives of the former set of characters on all the stages of Europe have smaller brains than the ablest representatives of the second class; and that they cannot with success interchange; the small brain cannot rise to the deep pathos of the large one, and the large brain cannot divest itself of its accompanying mental intensity, the very absence of which constitutes the peculiar aptitude of the small brain for the parts which it represents.

You ask, what constitutes a great endowment of Wit, Language, Imitation, Locality, and Individuality, but a "rapid," "copious," and "easy" manifestation of these powers? Did you ever meet with "a chattering creature" in society? If you have had this misfortune, you must have found, by painful experience, that nothing could exceed the "rapidity," "copiousness," and "ease" of his discourse; but that nothing could fall farther short of the energy and intensity of a Shakspeare. As you enjoy the "admiration of many ladies and dress-makers," you, of course, have been no stranger at musical entertainments: did you ever observe, then, that some ladies send forth from the piano-forte volumes of sound so rich in melody and intensely deep in power, that they melt the very soul of the listener; while there are other performers perfect in execution, correct in time, and strict observers of every rule of art, whose music is still

meagre and destitute of every quality fitted to excite and cherish emotion ; a large organ of Tune and large brain are essential to the first, and these will be found smaller in the latter.

You amuse yourself and your readers with picturing “ a mighty colourist bringing his tardy energies to act in a flower-garden, and labouring towards tremendous manifestations of his faculty,” &c. If you would know where such manifestations are in reality to be found, I would refer you to the works of that *mighty colourist Titian*, whose Venuses and Danaes are made by the power of colour to start from the canvass with all the energy of life,—to the gorgeous displays of colouring in the paintings of Rubens, who, with all the palpable defects of his taste in regard to form, his squab Cupids and Dutch-built Faiths and Charities, strikes the critic dumb with admiration by the force of colour alone. Above all, to the marvellous effects produced by mere colour in the *chiaro-scuro* of Rembrandt, where, by throwing an excess of brilliancy on one part of the picture, while the other is immersed in the deepest shade, he gives the appearance as of the sparkling of gems, or the radiation of light itself. I would refer you, lastly, to the mild rich glow in the colouring of Claude, where trees, temples, and waters, sleeping under the rays of his setting suns, are only exceeded in beauty by the pencil of that great and inimitable colourist—Nature. Allow me farther to observe, that, whether you are able to feel it or no, there is a *power* of conception and imagination in respect to *colour*, in the instances here mentioned, altogether beyond the reach of the most active little sorter of ribbands, male or female, that ever bustled behind or on the outside of a counter. A boarding-school Miss, when choosing the threads for her sampler, or papers for a fillagree tea-caddy, may have as *quick* a perception of the difference of shades, and exercise her organ of colour as actively as Titian or Rubens could for the soul of them ; but what a difference in the effect produced, *i. e.* in the *power* of manifestation !

“ There is,” you say, “ a *fourth* refutation, and that totally in-

"dependent of admissions, to be derived from the changes that
 "are so familiarly observed to take place in the characters and
 "propensities of men in the course of their lives, while the ele-
 "vations on their skulls remain as they were from the begin-
 "ning."—P. 311. "Is there any thing so common, for instance,
 "as to see a young spendthrift turned into an old miser? A man
 "who was scandalously prodigal from 20 to 40, becoming ex-
 "travagantly avaricious from 50 to 80?"—"Are there not
 "many amorous youths who degenerate into absolute woman-
 "haters in their middle age?"—P. 312. I have occasionally heard
 of such cases, but never having seen any, I can neither ad-
 mit, nor deny, nor explain them from practical observation;
 but, *2dly*, they are in direct opposition to your own state-
 ment on p. 302,—“That all the world knows, and the
 “Phrenologists themselves admit, that the vigour of any faculty
 “may be improved by exercise and education, and *the strength*
 “*of any propensity by habitual indulgence.*”—No doubt certain
modifications of character do sometimes take place in the
 course of the lives of individuals; but these are totally dis-
 tinct from those here cited from your pages. In the System
 of Phrenology, under the title of “Combinations in Activi-
 “ty,” p. 454, the case is supposed of “two individuals, in
 “each of whom *all the organs* are developed in *an average*
 “*degree* ;” and it is explained, that if the one be educated
 in moral and intellectual pursuits, this training will occasion
 the predominance of the higher faculties in activity in him;
 while, if the other be exposed to the temptations of vice,
 aided by ignorance, the lower faculties will in him become
 most active. It is added, “the principle now under discus-
 “sion is not inconsistent with the influence of size; because it
 “is only in individuals in whom the *organs are nearly on an*
 “*equality in point of size, that so great effects can be produced by*
 “combinations in activity. In such cases, the Phrenologist, in
 “estimating the effects of size, always inquires into the educa-
 “tion bestowed.”—“If an individual is very deficient in the
 “higher organs, he will remain vulgar in consequence of this
 “defect, although born and educated in the best society, and in
 “spite of every effort to communicate refinement by training;
 “while, on the other hand, if a very favourable development
 “of the organs of the higher sentiments and intellect is possess-
 “ed, the individual, in whatever rank he moves, will have the
 “stamp of nature’s nobility.”—P. 455.

If we suppose the case of a young man in whom all the

organs exist in nearly equal relative proportions, and who in his youth was exposed to the solicitations of profligate associates, but in his maturer years has had the good fortune to change his external circumstances, and come within the habitual influence of religious, moral, and intellectual society, it is quite obvious, that, without the least dereliction of phrenological principle, he may, in the latter condition, exhibit a great improvement of character; but this is totally different from a prodigal becoming a miser, or an amorous youth a woman-hater. And, besides, the phrenological statement must never be overlooked, that it is only where the organs are pretty much in equilibrio that such modifications, as are here admitted, actually occur; because this accords precisely with the fact in nature, that it is only *some profligates* who are reclaimable, while others set at defiance all the efforts of piety and philanthropy to accomplish their reformation. If there is not *some natural* obstacle to a change of character, why do we not *all* change for the better? Why do you, for example, not assume the profundity of Bacon, the elevation of Milton, and the fertility of Shakspeare? Why has any parent a wayward child, whose pride, selfishness, or cunning, he cannot subdue? Phrenology answers, because, in the one case, we cannot confer on ourselves such large organs of intellect as those illustrious men possessed; and, in the other, cannot eradicate from the brains of children large organs of Self-esteem and Secretiveness. The changes of character that Phrenology recognises are similar to those which the lion undergoes in a cage; the stimulus of hunger is sedulously averted, while bars and bolts are added to restrain his ferocity, and a degree of tameness is thus produced; but he is still *in nature* a lion. In like manner, by withdrawing excitement to the propensities, and adding the restraints of moral and intellectual influence, a man, who, in different circumstances, was vicious, may be rendered to some extent moral; but his nature is not changed. If we restore the temptations, and withdraw the restraints, he will return, like

a sow that is washed, to wallowing in the mire. This subject is ably discussed in an essay by Mr Lyon, published in the *Christian Instructor* for December, 1823, and in another paper in the *Phrenological Journal*, vol. I. p. 555.

Having now answered at considerable length those of your objections which go to the principles of Phrenology, I shall very briefly advert to such of them as relate more immediately to details.

You say, "the last and most effectual, or at least most tangible refutation is deduced from the actual want of any thing like distinct organs in the brain," (p. 311,) and again, "In the only organs of which we know any thing there is no such wondrous uniformity. The eye is a machine of a very different structure from the ear—the olfactory apparatus radically distinct from the gustatory; it would be strange, therefore, if we venerated the Deity, and were impelled to break lamps, by the state of two cones of the same substance lying under one bone! But there are no such cones, nor any traces of the 36 organs, except the elevations at the surface."—P. 313. Note.

Here, however, in this "your last, most effectual, and most tangible refutation," you are equally wrong as in your FOUR preceding refutations. Allow me to call to your recollection what you have stated on page 258, viz. that "Anatomy and experiment show farther, that sensibility of these organs" (of sight, hearing, and touch,) "depends on the nerves which belong to them—on the optic and auditory nerves, for example, as to seeing and hearing, or on the nerves of touch for many other sensations;" and again, in the same page, that "the nerves belonging to each of these senses seem to form its only material organ," and that "it is upon *their* peculiar structure or action that our sensations depend." Be it observed too, that the emphatic italics in these sentences are your own, and show your anxiety to have the fact mentioned well understood. Now if the "wondrous uniformity" of which you complain in the cerebral organs has really nothing analogous in any of our other organs, in all of which you think there is a distinctness of structure at once indicative of a distinctness of function, I would ask you, simply, to explain, how it has happened that for so many hundred years anatomists and physiologists should have been at variance in regard to the three nerves of

the tongue, and how they could not decide among themselves which was really the nerve of *taste*, which of *motion*, and which of *touch*? taste, motion, and touch being surely, *at least*, as distinct in their nature as the phrenological faculties of Veneration and Destructiveness, which you are surprised at finding acting through the medium of organs formed of the *same substance*.—When you tell us that the five senses depend for their sensibility on *nerves*, which are their “*only material organs*,” did you, “not being learned in anatomy,” imagine that each of these nerves was formed of such a different and dissimilar substance, that, by *looking* at them, you could point out the particular sense for which each was destined? If you did so, you are either in a mistake as to what is possible, or more gifted than ordinary observers. *Sensation* and *motion* again are nearly as dissimilar in their nature as any two of the phrenological faculties, and yet so far are these from being connected with organs more dissimilar in substance or appearance than those of the brain, that you yourself, in a note to the page already quoted, inform your readers that *only now* Mr Charles Bell, aided by Magendie and Flourens, has made it *highly probable* that “*the nerves which minister to sensation are different from those which produce voluntary motion* ;” and if you had been skilled in anatomy you would have been able to give precisely the same good reason for this being not only a very modern, but as yet not an universally-received discovery, as may be given for the lateness of the discovery of the true functions of the brain. You complain that the cones in the brain, though executing different functions, are not divided by visible partitions, or made of different kinds of substance. When you stated this as an objection, did you know that the nerves of sensation and motion are composed of similar substances not separated by any visible partitions, but running undistinguishably blended in one common sheath?

It may be mentioned also, that Dr Barclay started objections

precisely similar several years ago, in his work on Life and Organization, and that they are answered by Dr A. Combe in the Transactions of the Phrenological Society, p. 397.

You say that you have been assured by persons learned in anatomy, that all that is true in Drs Gall and Spurzheim's account of the brain "had been previously established by Reil and others;" and, in a note at the end of your review, you tell us that Dr Gordon, in "a masterly work," and an "admirable production, has clearly demonstrated, 1st, that the phrenological doctors have *no sort of claim to originality*, as to the far greater part of the anatomical facts they have held out as their discoveries; and, 2d, that all that is *really original* in their anatomy is *quite unsound and erroneous*, and founded either on most idle conjectures, or on a mere trick in the manner of operation, scarcely reconcilable with the dignity of scientific investigation." As you seem never to have thought it necessary to read Dr Spurzheim's answer to that "admirable production," the opinions of which you thus implicitly adopt, you will no doubt be surprised to learn that Drs Gall and Spurzheim have been infinitely more particular than Dr Gordon himself, in tracing the history of the anatomy of the brain, and *in giving to each discoverer the merit really due to him*; and that they themselves had quoted the very authors, and in several instances the very passages of those authors, which Dr Gordon long afterwards adduced to show their bad faith. When you repeat an assertion that first appeared in your own Review, No 49, and which has been refuted again and again, that "all that is true in their" (Drs G. and S.'s) "account of the brain had been previously established by Reil and others," it is obvious that you have not considered it necessary to read Dr Spurzheim's answer to Dr Gordon. It is there stated at p. 51, that at Halle, in the year 1805, "Professors Reil and Loder, and numerous gentlemen of the profession, honoured us with their presence at the public lectures and demonstrations. With Loder we repeated several times the anatomical demonstrations, and once we dissected with Reil a brain *quietly* in his own room. He was so much pleased with our demonstrations, that he gave to Dr Gall some drawings with which he was formerly occupied, *de structura nervorum et cerebelli*." "Thus," continues Dr S., "I

“ beg to observe, that in the summer of 1805, we demonstrated to Reil the same leading points in the anatomy of the brain which we still maintain ;” and it was after this (in 1809) that Reil published views essentially the same as those demonstrated by Gall and Spurzheim. Farther, in the *Phrenological Journal*, vol. I. p. 73, you will find evidence that *Reil himself* did not hesitate to declare, “ that he had obtained more information from the dissection of the brain performed by Gall, than he had believed it possible for a man to discover in his whole lifetime.” In this testimony to the anatomical merits of the “ phrenological doctors” Loder heartily concurs. If all that is really original in their anatomy is, as you assert, unsound, erroneous, and founded only on idle conjecture and mere trick, is it not somewhat astonishing that Reil, to whom you gratuitously ascribe the merits of the discoveries, should himself speak of them in such terms? and further, that so competent a judge as Cuvier should, in giving a summary of the anatomy of the brain in 1822, use the following words:—“ On sait aujourd’hui et surtout par *les dernières recherches de M. M. Gall et Spurzheim, que la nouvelle épinière, &c.*,” and goes on to describe the structure of the brain *precisely as explained by the phrenological doctors*, to whom alone Cuvier here refers. (Vide *Revue Encyclopedique*, November, 1822, p. 237.) If what you allege is really correct, is it not equally surprising that M. J. Cloquet, a distinguished anatomist of Paris, in a much-admired, very expensive, and splendid folio work, in 40 Nos. with lithographic plates, entitled “ *Anatomie de l’Homme*,” now in the course of publication, *has copied every one of the plates of the human brain contained in Drs Gall and Spurzheim’s great work?* He has done this with very slight acknowledgments of gratitude to their authors indeed; but the simple fact of his esteeming them as the most accurate, and engraving them in such a work, shows the degree of credit to which your Review, and “ the admirable production” of your authority, Dr Gordon, are entitled, when you “ venture to affirm” (in No 49 of the Review, p. 265,) “ that there is not one of these figures which accords with nature ;”

that the representations in plates VI. and XI. "are particularly "inaccurate;" that others "do not in the least degree approach to "accuracy;" and on p. 267, that in several plates "the omissions "are great, and in a considerable number the errors extravagant."

Is it not surprising, that in a place like Paris, where, from the abundance of subjects, every one can so easily verify the anatomical statements of Gall and Spurzheim, their descriptions should now be those adopted by the established professors and teachers of the science? I have already cited Cuvier and Cloquet, and I may safely add, that the late lamented Beclard, professor of anatomy at the Faculty of Medicine, whose genius is incontestable, and whose reputation is already European, although he was cut off in his prime, describes the structure in terms scarcely different from those of the phrenological doctors themselves.* Besides, in London, in 1826, Dr Spurzheim was entreated by the medical students to teach them the anatomy of the brain, and they raised a subscription to recompense him for doing so. These statements may seem tedious and unnecessary, but truth required them to be brought forward to dissipate the deception which you, unintentionally and in ignorance, endeavour to practise on those who pin their faith to your dicta, on the erroneous supposition that you are acquainted with the subject on which you are writing. Can you peruse the testimonies now adduced, and still "venture to affirm" that your own conduct is, in this instance, "reconcilable with the dignity of scientific investigation?"

On p. 317, you quote the case of a Welshman in St Thomas's Hospital, "who had received a considerable injury of "the head, but from which he ultimately recovered, and "who, *when he became convalescent*, spoke a language which "no one about him could comprehend." It turned out that he had recovered the use of the Welsh language which he had learned in his youth, but, owing to long disuse, had

* Beclard's Additions to Bichat, p. 38.

subsequently forgotten. After citing the case, you proceed: "The phenomenon is explained by supposing that a part of the organ of Language was injured, and that the effects of this injury were, 1st, to *destroy* for the time, that part of the machinery which served for the recollection of *English* words, and, 2d, to *restore* to a serviceable state, that part which had been originally used for recollecting *Welsh* ones, but had long been so much rusted and decayed as to be quite unfit for service. These are not metaphors employed to assist our conception of an obscure fact, or to give a sort of coherence to a strange statement, they ARE ALLEGED BY THE PHRENOLOGISTS as serious and literal truths, affording a plain and satisfactory explanation of a very extraordinary occurrence." Now, would any mortal believe that every word of these explanations and statements is a pure fiction of your own, gratuitously put into the mouths of the Phrenologists, apparently for no purpose but to afford scope for ridicule. Not only are there no such assertions or expositions in my work, but there is nothing approaching to them. After quoting from an opponent of Phrenology the case of the Welshman, the only remark made upon it by me is, "Such a fact as this is totally inexplicable on any principle, except that of the existence of organs by which the faculties are manifested; for it could not be the mind itself that was affected, and its faculties impaired by the fever or which recovered long-lost knowledge by the influence of this disease."—*System of Phrenology*, p. 315.

On page 318 of the Review, it is said, "We have left room enough, we dare say, for *cavil* and *misrepresentation* on the part of those who think those the best weapons of controversy; it is not, however, to them that we address ourselves, and we care nothing at all for their hostility." There are no limits certainly to the abuse of words; but if your Review is deliberately meant to be exhibited by you as a specimen of what you mean by *candour* and *scrupulosity*, no doubt this answer to it may be viewed as replete with "*cavil* and *misrepresentation*."

You attempt another refutation of Phrenology, by affirming, that a man may not only be *well banged* on all his organs, but that he may be deprived of the greater number of them altogether, without injury to any mental faculty. Instead

of wasting time in answering at length, a proposition worthy indeed of the author of the discovery, that insects perform all their functions as well without, as with heads, I shall merely state, that the principle of a plurality of organs, as applied to the explanation of the phenomena attendant on partial injuries of the brain, has been recognized by the best professional authorities, as the most satisfactory and consistent that has ever been propounded. In the *Medico-Chirurgical Review* for October, 1826, the following passage occurs:—
“The last of these questions” (the objection arising from injuries of the brain) “is investigated in an elaborate paper furnished to the “System,” by Dr A. Combe, which succeeds completely in removing the objection. His reasons seem to us unanswerable, and unfold views which the physician can apply to the best purposes. The Essay is altogether satisfactory.”—P. 466.

On page 296, you say, “If it were really true, that certain very visible and well-defined bumps on the skull were the necessary organs of all our faculties and propensities,—just as our eyes are of sight and our ears of hearing,—it is, in the first place, inconceivable, that the discovery should have remained to be made in the beginning of the 19th century.”

The same profound objection goes to show, that the discovery of the revolution of the globe could not be true, because it was not made by Copernicus till 1510, nor defended by Galileo till 1608; that Harvey’s discovery of the circulation of the blood must be a fable, because mankind continued ignorant of it till 1619; and that gas-light must be a perfect nonentity, because it was unknown till our own day! In the introduction to the “System” it is explained how the discovery was not made sooner; *Dissection* does not reveal the *functions* of any organ, and *Consciousness* does not intimate even the existence of organs of the mental faculties; nevertheless, anatomists prior to Dr Gall studied the brain chiefly by dissection, and metaphysicians studied the mind by reflection on their own consciousness; while he adopted a method entirely new, that of comparing the power of manifesting the various faculties with the size of particular parts

of the brain. It is, therefore, not strange, that he should arrive at results which the imperfections of their methods rendered it impossible or them to reach.

You proceed :—" In the second place, it is still more inconceivable, that, after the discovery was made, there should be *any body* who could pretend to doubt of its reality. The means of verifying it, one would think, must have been such as not to leave a pretext for the slightest hesitation ; and the fact that, after twenty years preaching in its favour, it is far more generally rejected than believed, might seem to afford pretty conclusive evidence against the possibility of its truth."—P. 296.

In answer, I beg to refer you to Mr Locke's observations, cited on p. 9 of this Letter, and to the following extract from Professor Playfair's " Dissertation," prefixed to the Supplement of the Encyclopædia Britannica :—

" It must not be supposed," says he, " that so great a revolution in science, as that which was made by the new analysis, (by Newton,) could be brought about entirely without opposition, as in every society there are some who think themselves interested to maintain things in the condition wherein they have found them. The considerations are indeed sufficiently obvious, which, in the moral and political world, tend to produce this effect, and to give a stability to human institutions often so little proportionate to their real value, or to their general utility. Even in matters purely intellectual, and in which the abstract truths of arithmetic and geometry seem alone concerned, *the prejudices, the selfishness, or the vanity of those who pursue them, not unfrequently combine to resist improvement, and often engage no inconsiderable degree of talent in drawing back, instead of pushing forward, the machine of science.* The introduction of methods entirely new must often change the relative place of the men engaged in scientific pursuits, and must oblige many, after descending from the stations they formerly occupied, to take a lower position in the scale of intellectual improvement. The enmity of such men, if they be not animated by a spirit of real candour and the love of truth, is likely to be directed against methods by which their vanity is mortified and their importance lessened."—*Dissertation, part 2d, p. 27.*

Mr Playfair, again, speaking of the discoveries of Newton in regard to the composition of light, says, " But all were not equally candid with the Dutch philosopher, [Huygens], and though the discovery now communicated had every thing to recommend it which can arise from what is great, new,

“and singular, though it was not a theory or system of opinions, but the generalization of facts made known by experiments, and though it was brought forward in a most simple and unpretending form, a host of enemies appeared, each eager to obtain the unfortunate pre-eminence of being the first to attack conclusions which the unanimous voice of posterity was to confirm.”—(P. 56.) “Among them, one of the first was Father Pardies, who wrote against the experiments, and what he was pleased to call the *HYPOTHESIS* of Newton. A satisfactory and calm reply convinced him of his mistake, which he had the candour very readily to acknowledge. A countryman of his, Mariotte, was more difficult to be reconciled, and though very conversant with experiment, appears never to have succeeded in repeating the experiments of Newton.”—*Ib.* p. 57.

Here Mr Playfair’s arm is raised not only to avenge the illustrious dead, but to protect from insult discoverers of every age. It is impossible to arrest the blow, even although it is you, his friend, who have thrust your head into the line of its descent.

On pages 295 and 296, you make a variety of allegations hostile to Phrenology, and say, that the Phrenologists “know well enough that the great body of the public concurs” with you;—you should have added, “and the whole empire of China!”—If I have been successful in showing, that it is *impossible* to know any thing at all of the matter, except by practising observations, which you, and the great body of the public, misled by you, *have never done*, it follows that the good people of China are in every respect as competent witnesses against the truth of Phrenology as you and your adherents; and if *numbers* are to decide the question, they are not to be despised. You know well enough, that that portion of the public who have *examined the evidence* are to a man against you; and according to all rules of probation hitherto acted upon, the testimony of ten men informed on a subject outweighs that of a countless multitude whose ignorance is their only qualification. If I am not greatly deceived, you have in the present article over-estimated the extent of public ignorance regarding Phrenology, and relied on it a little more than may be advantageous to your philosophical reputation.

On p. 293, you state, that the whole question is, "whether it be really *true*, that certain bumps on the head are the organs of certain primitive, distinct, and universal faculties," you admit that "we cannot take upon ourselves to say that the facts are absolutely false," but excuse yourself, in the following words, for not entering on a scrutiny of this most important of all the points in the discussion. "Suppose," you say, "that we were merely to allege that, so far as our observation went, the facts (of the Phrenologists) seemed all to be imaginary—that it was a matter of notoriety, that men with large heads were not generally of superior endowments, nor those with small, deficient in understanding—that in the circle of our acquaintance there were many kind mothers without any protuberance on the lower part of their skulls, many men of wit with no triangular prominences beyond the temples, and many eloquent and loquacious persons, of both sexes, with no unusual projection of the eyes—that, in fact, we had never happened to meet with any one individual in whom a marked peculiarity of character or disposition was accompanied by any of their external indications, and that we daily saw remarkable enough bumps on the heads of very ordinary people—that most of those with whom we conversed had made the same observations, and concurred in the same results," &c.

"They would call on us to name our instances, and would cavil at them when they were named; or, because we declined submitting the heads of respectable ladies and gentlemen to an impertinent palpation, and their characters, temper, and manners, to a still more impertinent discussion,—because we did not choose to offend many worthy people, by pointing them out as the owners of bumps, without the corresponding faculties,—or to engage in a quarterly wrangle about the Ideality of Dr Chalmers, or the Adhesiveness of Mrs M'Kinnon, they would complain, that we used allegations which we refused to verify, and contend, that nothing but a fair scrutiny was wanting to their success."—P. 296.

No, indeed, the Phrenologists would make no such complaints. In regard to your facts, they would simply remind you, that you entered upon the observation of them avowedly with the conviction, "first, that *there is not the least reason to suppose that any of our faculties, but those which connect us with external objects, or direct the movements of our bodies, act by material organs at all, and that the phrenological organs have no analogy whatever with those of the external senses*; second, that *it is quite plain, that there neither*

“are, nor can be, any such primitive and original faculties as the “greater part of those to which such organs are assigned.”—P. 294. They would remark, farther, that the consequences of these impressions would be, first, that you would not, in all probability, take the trouble to become acquainted accurately, with the form and position of organs which you had thus settled to be mere fictions of imagination; and, secondly, that you would be as little likely to study, so as to comprehend distinctly, the functions ascribed to faculties which you had already dismissed, as what neither existed nor could exist; and they would state, with all deference, that a person thus prepossessed was not in the *best condition* for making *impartial* observations, and would not be *over-disposed* to recognize concomitances of organic development with mental manifestations, even although such should actually present themselves. As proofs of the truth of these inferences, they would refer, first, to your ignorance of the situation of the organs manifested, in your placing “COLOUR in the “forehead, and TUNE on the eyebrow, over the *middle of “the eye,”* p. 259, and describing Concentrativeness on one page, (274,) “as having a goodly organ in the *back* part of “the head, just above Love of Children and below Self-esteem;” and on another page, (274,) as having “two distinct organs of *an angular shape* on the *sides* of the cranium;” secondly, to your blunders concerning the faculties, which are nearly as numerous as your notices of them; and, thirdly, to the surprising circumstance, that you “*never* happened to “meet with *any one individual* in whom a marked peculiarity of character or disposition was accompanied by *any “of* their external indications,” because, unless you had been absolutely resolved not to see, you must, according to the principle of the calculation of chances, have stumbled, *by mere accident*, upon, at least, one concomitance, out of any considerable number of observations.*

* The assertion in the text really *proves*, either that you have never looked, or been unwilling to see. You have frequently met Mr Thomas Moore,

As to calling you to "name your instances," and engage in a quarterly wrangle about the Ideality "of Dr Chalmers, "or the Adhesiveness of Mrs M'Kinnon," the Phrenologists would not propose any such offence to your editorial dignity and delicacy. If you wished to come to issue on the facts of the science, they would invite you to the Phrenological Hall, (and this they have done for the last four years, and by opening it to public inspection,) they would show you authenticated casts of the skulls of King Robert Bruce, Raphael, La Fontaine, Bellingham, Sheridan, &c. ; masks, taken from nature, of *Henri Quatre*, Swift, Burke, Pitt, Fox, &c. ; masks from authenticated busts of Voltaire, Franklin, &c. ; actual skulls of executed criminals, whose actions were proved before juries ; and a great variety of skulls of most of the nations of the globe, whose manners and characters are matters of philosophical history ; and they would stand or fall by the accordance, or non-accordance of the development of brain in these instances, with the publicly-acknowledged talents and dispositions of the individuals and nations.

I regret, that, in addition to all the other points of your article, which it has been imperative on me to controvert, I am obliged to call in question, and reject, an indirect compliment which you are pleased to bestow upon my work, not, as, perhaps, you anticipate, because it is not sufficiently flattering to my Self-esteem, but because it is ill-founded and unjust. You say, that Phrenology, in my hands, has "assumed, FOR THE FIRST TIME, an aspect not absolutely "ludicrous, by my retrenching many of the ridiculous illustrations and inconsistent assumptions of *its inventors*," &c.

and you are intimately acquainted with his works. The Westminster Review was led to remark, that in his life of Sheridan there are 2500 similes, exclusive of metaphors and regularly-built allegories. This is pretty conclusive evidence as to his manifesting the *faculty* of Comparison, as described in the System, p. 339 ; and I venture to state, from observation, that the organ is so largely developed in his head as to be discernible at the distance of several yards, in the very form assigned to it on the busts : and yet you never saw this concomitance !

Such an assertion could be made only in utter ignorance of the writings of Drs Gall and Spurzheim,—men whose profound intellects and extensive information place them in the highest rank of philosophical authors.

This letter, like your review, has turned out rather long and desultory; and I beg leave, in concluding, briefly to recapitulate the topics on which it has touched. I have endeavoured then, to shew that Phrenology is more widely extended, and deeply rooted in the public estimation, than you appear to be aware of;—that your grand proposition, of the internal mental faculties not acting by means of organs at all, is refuted, by the known effects of opium and wine, and also discountenanced by the authority of your own review, of Cullen, Gregory, and Magendie;—that your objection to the assignment of separate faculties to the mind, is obviated by Mr Welsh's metaphysical answer, and absolutely refuted by the successive appearance of the mental powers in youth, by the phenomena of partial genius, of dreaming, somnambulism, idiocy, and monomania;—that in your denial of the Phrenological faculties, as primitive principles of mind, you stand opposed to Reid, Kames, Stewart, Brown, and the greatest metaphysicians of Britain, who admit of faculties similar to seven-tenths of them;—that in your attempts to resolve several of these faculties into one, as the love of young women, of children, &c., into Benevolence, and Hope and Fear into mere negations of each other, you refute yourself;—that your objections to Concentrativeness, Individuality, Size, and Weight, are founded on erroneous representations of the Phrenological statements and conclusions;—that on Colouring, the Phrenological theory is consistent in itself, and with nature; while your *doctrine* in the Encyclopædia, and *fact* in the Review, on this point, are at variance with each other;—that your objections to *Size* in the organs, as a measure of power in the case of the external senses, are refuted by the authority of Blumenbach, Sœmmering, Monro, &c.; all of whom teach, that this rule holds, in regard to the nerves of the senses, con-

firming thereby the opinions of “grand-mamma wolf,” and upsetting yours;—that Magendie teaches the same doctrine, in regard to the brain and internal faculties;—that the reality of the distinction between *power* and *activity*, as separate qualities of mind, which you deny, is supported by the opinion of Bonaparte, and proved, besides, by examples of characters on the stage;—that this distinction holds even in the case of colouring, as is established by the power displayed by Titian and Rubens on canvas, contrasted with the activity of an assorter of ribbons, or of a miss selecting threads for her sampler;—that your objections, founded on the effects of education and disease in the mental faculties, are rendered plausible, solely by your omitting the qualification, constantly stated by the Phrenologists, that *Size* determines *power*, *only* when OTHER THINGS ARE EQUAL; and by misrepresenting their doctrine, which is this, that if the *same* education, or the *same* stimulus of disease is applied to two brains, one large, and the other small, the effects produced will be great or small in the direct ratio of the size of the brain;—that modifications of character to some extent are perfectly in accordance with phrenological principles; but that changes of talents and dispositions have their limits in nature, and in Phrenology also;—that your objections to the Phrenological organs not being radically distinct in their appearances, are equally applicable to many of the nerves, and particularly to the nerves of motion and feeling, which are as little distinguishable from each other in structure and appearance, as the organs in the brain, and yet are ascertained to perform separate functions;—that your contempt of the anatomical discoveries of Drs Gall and Spurzheim, is founded in ignorance, and discountenanced by the greatest modern anatomists,—while your assignment of the merit of such part of them as you admit to be true, to Reil, is refuted by the testimony of Reil himself;—that the treatment which Phrenology has met with from

you and other critical authorities, is accounted for by Professor Playfair, when discussing the reception given to the discoveries of Newton ;—that the Phrenologists have offered you means of verifying or refuting their facts, not inconsistent with either your dignity or delicacy, but of which you have sedulously declined to avail yourself ;—and, finally, that, even in the indirect praise which you bestow on the System of Phrenology, the same lack of knowledge and just discrimination is conspicuous which characterizes all the other parts of your Article.

I have the honour to be,

SIR,

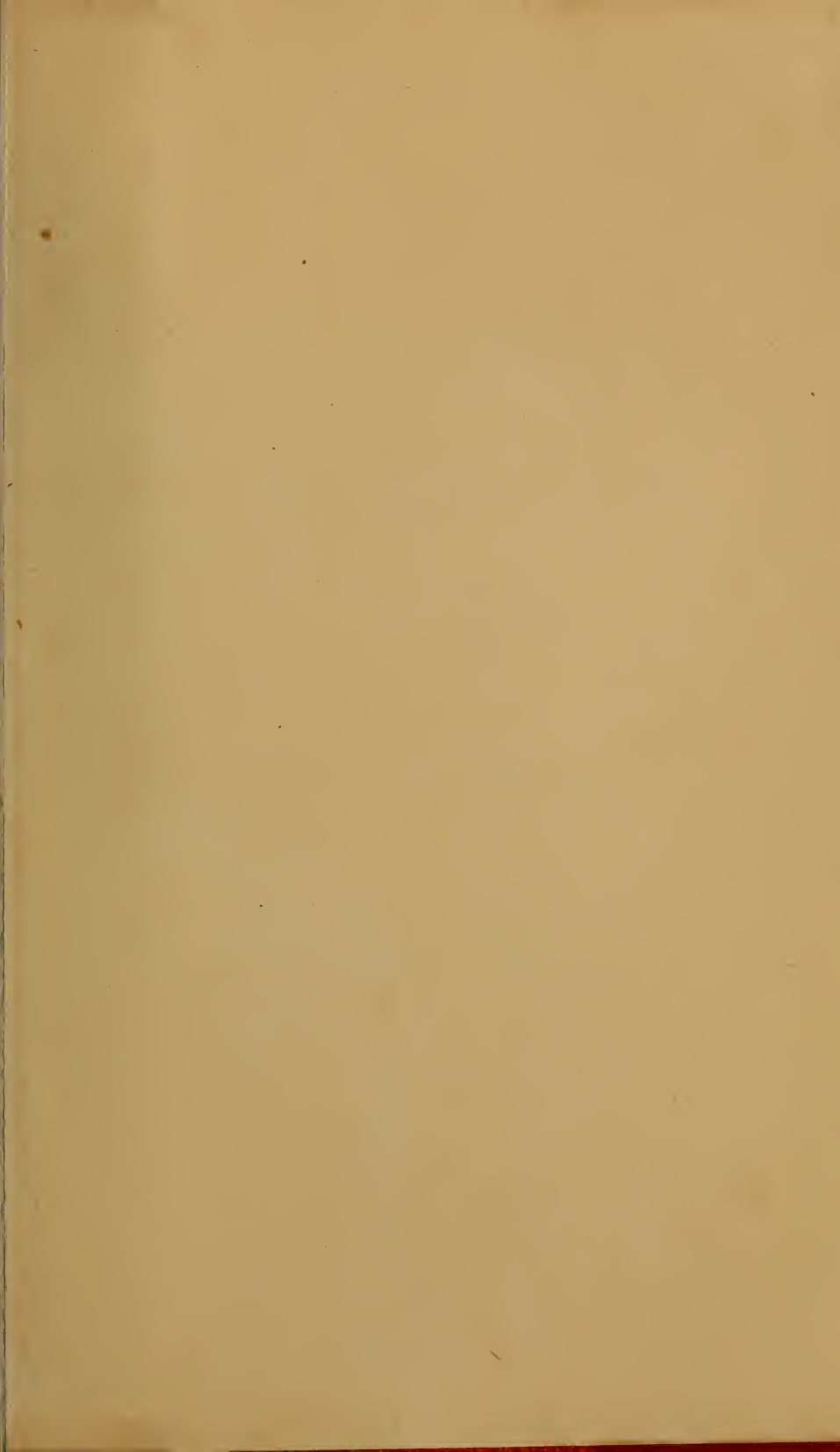
Your most obedient, very humble servant,

GEO. COMBE.

Edinburgh, October 31, 1826.







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